HB

69

SENATE COMMITTEE REPORT

DATE: 2/14/03

FURTHER:

DATE TURNED IN TO OFFICE: 4-1-03

Resources Committee considered HOUSE BILL NO. 69

HB 69 REGULATION OF SHALLOW NATURAL GAS

"An Act relating to regulation of shallow natural gas leasing and closely related energy projects; and providing for an effective date."

and recommends:

[ ] be **replaced** with S **CS** HB 69 (RES)

[ ] adopt **previous** _____ **CS** _____ (_____)

[ ] attached amendment(s)

[ ] adopt Letter of Intent by _____ Committee

[ ] further referral to _____ Committee

Senate Bill:
[ ] same title
[ ] new title

House Bill:
[X] same title
[ ] technical title
[ ] new: SCR #_____

NEW FISCAL NOTE(S):

Department	Date	Fiscal	Zero	FN#

PREVIOUS FISCAL NOTE(S):

Department	Date	Fiscal	Zero	FN#
ADM	2/6/03		✓	

[ ] **APPROPRIATION - no fiscal note**

SIGNATURES AND RECOMMENDATIONS:	DO PASS	DO NOT PASS	NO REC	AMEND
	✓			
	✓			
	—			
			✓	
CHAIR:	✓			

23-LS0428\C
Chenoweth
3/28/03

SENATE CS FOR HOUSE BILL NO. 69( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-THIRD LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVES KOHRING, Masek, Chenault, Harris, Gatto, Stoltze, Heinze, Morgan, Rokeberg, Anderson, Wilson, Hawker, Foster, Croft, Dahlstrom

A BILL

FOR AN ACT ENTITLED

"An Act relating to regulation of shallow natural gas leasing and closely related energy projects; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The uncodified law of the State of Alaska is amended by adding a new section to read:

LEGISLATIVE FINDINGS. The legislature finds that

(1) the development of unconventional natural gas resources, including coal bed methane, is in the best interests of the State of Alaska;

(2) unconventional natural gas is abundant and widespread in Alaska and bears the promise of providing Alaskans, particularly Alaskans living in rural areas, with an inexpensive and clean source of energy if those resources can be economically developed;

(3) the development of unconventional natural gas poses significantly fewer risks and creates substantially less impact to the environment than traditional deep oil and gas projects, which have served as the model for oil and gas industry and environmental

regulations to date in Alaska;

(4) the regulatory requirements developed and applied to traditional deep oil and gas projects in Alaska are ill-suited and unduly onerous when applied to unconventional natural gas projects, threatening the economic viability of otherwise desirable exploration and development projects;

(5) there is an immediate state and national need for the development of clean and economical unconventional energy sources, such as unconventional natural gas resources;

(6) reform of existing laws and regulations is needed to remove unnecessary regulatory burdens on the private sector to foster and encourage the development in Alaska of these necessary resources;

(7) the legislature is acting in the interest of promoting the active development of such resources, while ensuring that suitable measures are taken to protect human health and safety and the natural environment,

(A) to remove impediments to the responsible development of unconventional natural gas;

(B) to provide the proper state agencies with clear authority and discretion to adopt regulatory practices appropriate to unconventional natural gas exploration and development projects, in recognition of the lower risks posed by such projects to human health and safety and the natural environment; and

(C) to reserve all rights and powers not preempted by federal law and regulation in order to assert state primacy over the regulation of unconventional natural gas, including coal bed methane.

* **Sec. 2.** AS 31.05.030 is amended by adding a new subsection to read:

(j) For the purposes of AS 46.04.030(b), the commission shall determine whether a well drilled for unconventional natural gas, including coal bed methane, may penetrate a formation capable of flowing oil and, if so, establish the response planning standard for oil discharge prevention planning set out in AS 46.04.030(k) that must be met.

* **Sec. 3.** AS 31.05.060 is amended by adding new subsections to read:

(c) Notwithstanding the requirements of (a) and (b) of this section that relate to fixing a date for a hearing and causing notice of the hearing to be given, for an

action under this chapter that involves the exploration for or development of unconventional natural gas and that has application to a single well or a single field, upon the request of a lessee or operator, the commission may, where operations might be unduly delayed, approve a variance from the commission's regulations that apply to the well or field without providing notice and opportunity to be heard. In the exercise of its authority to issue the variance,

(1) the commission may approve the variance if

(A) the approval provides at least an equally effective means of accomplishing the requirement set out in the commission's regulation; or

(B) the commission determines that the request is more appropriate to the proposed operation than compliance with the requirement of the regulation; and

(2) the terms of the approval of the variance may include exempting the lessee or operator from a requirement of a regulation if the commission determines that the requirement is not necessary or not suited to the well or field taking into consideration

(A) the nature of the operation involved;

(B) the characteristics of the well or field for which the variance is sought; and

(C) the reasonably anticipated risks of the exemption from the requirement to human safety and the environment.

(d) The provisions of (c) of this section do not apply to authorize approval of a variance from the commission's regulations that relate to underground injection.

* **Sec. 4.** AS 31.05 is amended by adding a new section to read:

Sec. 31.05.125. Regulation of unconventional natural gas; relationship of chapter to other laws. Consistent with meeting its obligation under sec. 1, art. VIII, Constitution of the State of Alaska, to encourage the development of its resources for maximum use consistent with the public interest, the state reserves unto itself all rights and powers not preempted by federal law and regulation in the regulation of exploration for or development of unconventional natural gas, including coal bed methane, on state land under this chapter.

* Sec. 5. AS 38.05.177 is amended by adding a new subsection to read:

(o) Consistent with meeting its obligation under sec. 1 art. VIII, Constitution of the State of Alaska, to encourage the development of its resources for maximum use consistent with the public interest, the state reserves unto itself all rights and powers not preempted by federal law and regulation in the regulation of exploration for or development of unconventional natural gas on state land under this chapter.

* Sec. 6. AS 46.04.030(b) is amended to read:

(b) A person may not cause or permit the operation of a pipeline or an exploration or production facility in the state unless an oil discharge prevention and contingency plan for the pipeline or facility has been approved by the department and the person is in compliance with the plan. This subsection does not apply to an exploration **or production** facility used solely to explore for **or to develop or produce unconventional** [SHALLOW] natural gas **resources, including coal bed methane gas, except that this exemption does not apply if the Alaska Oil and Gas Conservation Commission determines**

(1) under AS 31.05.030(j) that a well drilled for unconventional natural gas may penetrate a formation capable of flowing oil; and

(2) the volume of oil encountered will be of such quantities that a contingency plan with an appropriate response planning standard described in AS 46.04.030(k) will be required [BY MEANS OF DRILLING A WELL ON A LEASE AUTHORIZED UNDER AS 38.05.177].

* Sec. 7. AS 46.40 is amended by adding a new section to read:

Sec. 46.40.205. Consistency determinations for certain activities involving unconventional natural gas. When conducted under oversight and regulation of the Alaska Oil and Gas Conservation Commission and the state's resource agencies, projects for the exploration and development of unconventional natural gas are consistent with the program described in this chapter. Persons responsible for activities subject to this section shall obtain all required permits and approvals from municipal, state, and federal agencies as otherwise required by law.

* Sec. 8. This Act takes effect immediately under AS 01.10.070(c).

Terminology and Definition Changes to HB 69 (ver. B)

1. Change "unconventional" to "shallow" throughout.

2. Insert a new section of the bill providing as follows:

AS 31.05.170 is amended by adding a new paragraph to read:

(15) "shallow natural gas" means coalbed methane, natural gas drilled for under a lease authorized by AS 38.05.177, or natural gas drilled for in a well whose true vertical depth is 4,000 feet or less.

3. As to current Sec. 5 of the bill, place the text in a new section of AS 38.05 rather than in a new subsection to AS 38.05.177, and add a sentence at the end of the new section as follows:

For purposes of this section, "shallow natural gas" has the same meaning as in AS 31.05.170.

4. Insert a new section of the bill providing as follows:

AS 46.04.900 is amended by adding a new paragraph to read:

(30) "shallow natural gas" has the same meaning as in AS 31.05.170.

5. Add a sentence at the end of current Sec. 7 of the bill as follows

For purposes of this section, "shallow natural gas" has the same meaning as in AS 31.05.170.

Subject: HB 69 latest
Date: Thu, 27 Mar 2003 16:12:08 -0900
From: Randy Ruedrich <randy_ruedrich@admin.state.ak.us>
Organization: AOGCC
To: Linda J Hay <linda_hay@legis.state.ak.us>
CC: Dan Seamount <dan_seamount@admin.state.ak.us>,
Sarah Palin <sarah_palin@admin.state.ak.us>,
Randolph A Ruedrich <randy_ruedrich@admin.state.ak.us>

Our amendment uses the term "shallow" in place of "unconventional" through out the bill and providing a definition of "shallow natural gas."

Please call me if you have any questions.

Randy Ruedrich
Alaska Oil and Gas Conservation Commission

Fixes to HB 69 ver B 3-27 (not c-plan).doc	**Name:** Fixes to HB 69 ver B 3-27 (not c-plan).doc **Type:** WINWORD File (application/msword) **Encoding:** base64 **Download Status:** Not downloaded with message

FISCAL NOTE

STATE OF ALASKA
2003 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: HB 69
(H) Publish Date: 2/7/03

Revision Date/Time (Note if correction):
Dept. Affected: Administration

Title: An Act relating to regulation of shallow natural gas
BRU: Alaska Oil & Gas Cons. Com
Component: Alaska Oil & Gas Cons. Com

Sponsor: Rep. Kohring
Requester: (H) Spec Committee on Oil & Gas
Component No.: 2010

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0
Contractual	0.0	0.0	0.0	0.0	0.0	0.0
Supplies	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0
Other (Specify Type--Do not abbreviate)	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2003) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2004 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

Zero fiscal impact.

Prepared by: Cammy Taylor
Phone
Division: Alaska Oil and Gas Conservation Commission
Date/Time: 2/6/03 12:38 PM

Approved by: Mike Miller
Date: 2/6/2003
Agency: Department of Administration

FISCAL NOTE

STATE OF ALASKA
2003 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 69
() Publish Date:

Revision Date/Time (Note if correction):
Dept. Affected: Administration
Title: An Act relating to regulation of shallow natural gas
BRU: Alaska Oil & Gas Cons. Com
Component: Alaska Oil & Gas Cons. Com
Sponsor: Rep. Kohring
Requester: (H) Spec Committee on Oil & Gas
Component No.: 2010

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0
Contractual	0.0	0.0	0.0	0.0	0.0	0.0
Supplies	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)						
1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0
Other (Specify Type--Do not abbreviate)	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2003) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2004 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

Zero fiscal impact.

Prepared by: Cammy Taylor
Phone
Division: Alaska Oil and Gas Conservation Commission
Date/Time: 2/6/03 10:56 AM
Approved by: Mike Miller
Date: 2/6/2003
Agency: Department of Administration

(Revised 9/2002 OMB)

ALASKA STATE LEGISLATURE

Interim:
600 East Railroad Avenue
Wasilla, Alaska 99654
(907) 373-1842
Fax (907) 373-4729

Session:
State Capitol Building
Juneau, Alaska 99801-1182
(907) 465-2186
Fax (907) 465-3818

REPRESENTATIVE VIC KOHRING
DISTRICT 14

Memorandum

To: Senator Scott Ogan, Chair
Senate Resources Committee

From: Vic Kohring, Chair
Oil & Gas Committee

Date: February 18, 2003

Re: Request for bill hearing on HB 69 "REGULATION OF SHALLOW NATURAL GAS".

I respectfully request a committee hearing on House Bill 69 be scheduled on February 24, 2003 or at your earliest convenience. This legislation will streamline the permitting process for drilling shallow wells for methane deposits in coal beds.

Thank you for your consideration.

Attached: HB 69, Sponsor Statement, fiscal note and sectional analysis and back up material.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM January 29, 2003

SUBJECT: House Bill 69, relating to the regulation of shallow natural gas leasing and closely related energy projects; and providing for an effective date -- sectional analysis (Work Order No. 23-LS0428\A)

TO: Representative Vic Kohring

FROM: Jack Chenoweth
Assistant Revisor of Statutes

Under AS 31.05, the Alaska Oil and Gas Conservation Commission regulates a wide range of activities involving the production of natural gas. The chapter contemplates that the full commission, or a quorum of it, will take final action in all matters under its jurisdiction.

This measure concerns itself with respect to the commission's oversight of shallow natural gas (coal bed methane) from a single well or single field. **Bill section 1** provides that "where operations [involving shallow natural gas/coal bed methane exploration or development] might be unduly delayed," a member of the commission's professional staff who has been designated by the commission to do so could "approve a variance from the commission's regulations that apply to [the] well or field without conforming to requirements of [AS 31.05.060(b)]," the notice and hearing provisions of the section involving the full commission. In addition, the language of the section sets out the two standards or conditions under which the variance may be granted or withheld and describes the circumstances under which an exemption from a requirement of a commission-approved regulation may be given.

Bill section 2 gives the measure an immediate effective date.

JBC:med
03-078.med

ALASKA STATE LEGISLATURE

Interim:
600 East Railroad Avenue
Wasilla, Alaska 99654
(907) 373-1842
Fax (907) 373-4729

Session:
State Capitol Building
Juneau, Alaska 99801-1182
(907) 465-2186
Fax (907) 465-3818

REPRESENTATIVE VIC KOHRING
DISTRICT 14

SPONSOR STATEMENT

HB 69

House Bill 69 is legislation that clarifies the Alaska Oil and Gas Conservation Commission's (AOGCC) authority to regulate the state's shallow and unconventional natural gas resources, including allowing for variances from AOGCC's general regulatory requirements in certain cases. Alaska possesses tremendous shallow natural gas resources, such as shallow coal bed methane gas. Production involves extraction of methane gas from coal deposits lying at relatively shallow depths of about 3,000 feet. In Cook Inlet alone, there is an estimated 1.5 trillion tons of coal, with an estimated 200 trillion cubic feet of coal bed methane. Two hundred trillion cubic feet of gas is enough to supply U.S. natural gas requirements for more than eight years. The entire state has coal-bed methane resources estimated at 1,000 trillion cubic feet, not including natural gas from tight sands also in place across Alaska.

Statewide, these resources are abundant and widely distributed. They hold the promise of bringing a much cleaner, locally-produced, alternative energy source to areas of rural Alaska long dependent upon diesel or fuel oil barged in from distant sources for heat and power. Production of coal-bed methane and other forms of shallow natural gas development also has little effect on the environment. A typical well is drilled in two to three days, and advanced drilling technology uses simple air to drill a well, greatly reducing drilling wastes. Further, wells are lined and cemented from top to bottom which protects groundwater, and as no oil is present, there is no risk of an oil spill. Once in production, the "footprint" of a typical well is less than one acre.

Despite such promise and benefits, shallow natural gas and coal bed methane are still expensive to develop. Such projects are very sensitive to development and production costs which include the costs of safety and excessive regulations. Shallow natural gas is being regulated as though it is a deep hole, high-pressured reservoir such as on the North Slope. In fact, shallow gas wells are more like low-pressure water wells that produce gas. Therefore, the purpose of HB 69 is to ensure that the AOGCC has the authority and discretion necessary to regulate such projects in an appropriate manner, suited specifically to the nature and characteristics of shallow natural gas development projects, while also providing for human safety and environmental protection.

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

Requested By: Mayor Keller
Prepared By: Administration
Meeting date: February 10, 2003
Adopted: February 10, 2003
Vote: Unanimous

CITY OF WASILLA
RESOLUTION SERIAL NO. 03-05

A RESOLUTION OF THE WASILLA CITY COUNCIL IN SUPPORT OF HB 69 RELATING TO REGULATION OF SHALLOW NATURAL GAS LEASING AND CLOSELY RELATED ENERGY PROJECTS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, HB 69 is legislation that clarifies the Alaska Oil and Gas Conservation Commission's (AOGCC) authority to regulate the state's shallow and unconventional natural gas resources, including allowing for the variances from AOGCC's general regular requirements in certain cases, and

WHEREAS, Alaska possesses tremendous shallow natural gas resources in the trillions of cubic feet, while two hundred trillion cubic feet is enough to supply U. S. natural gas requirements for more than eight years, and

WHEREAS, Statewide they hold the promise of bringing a much cleaner, locally-produced, alternative energy source to areas of rural Alaska, and

WHEREAS, production of coal-bed methane has little effect on the environment, however, are still expensive to develop. It is being regulated as though it were a deep-hole, high-pressured reservoir, when in fact; gas wells are more like low-pressure water wells.

NOW THEREFORE BE IT RESOLVED by the Wasilla City Council that support of HB 69 is to ensure the AOGCC has the authority and discretion to regulate such projects in an appropriate manner, suited specifically to the nature and characteristics of shallow nature gas development projects, while also providing for human safety and environmental protection.

ADOPTED by the Wasilla City Council on February 10, 2003.

Howard O'Neil
HOWARD O'NEIL, Deputy Mayor

ATTEST:

K L Smithers
KRISTIE L. SMITHERS, CMC
City Clerk

[SEAL]

Requested By: Mayor Keller
Prepared By: Administration
Meeting date: February 10, 2003
Adopted: February 10, 2003
Vote: Unanimous

CITY OF WASILLA
RESOLUTION SERIAL NO. 03-05

A RESOLUTION OF THE WASILLA CITY COUNCIL IN SUPPORT OF HB 69 RELATING TO REGULATION OF SHALLOW NATURAL GAS LEASING AND CLOSELY RELATED ENERGY PROJECTS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, HB 69 is legislation that clarifies the Alaska Oil and Gas Conservation Commission's (AOGCC) authority to regulate the state's shallow and unconventional natural gas resources, including allowing for the variances from AOGCC's general regular requirements in certain cases, and

WHEREAS, Alaska possesses tremendous shallow natural gas resources in the trillions of cubic feet, while two hundred trillion cubic feet is enough to supply U. S. natural gas requirements for more than eight years, and

WHEREAS, Statewide they hold the promise of bringing a much cleaner, locally-produced, alternative energy source to areas of rural Alaska, and

WHEREAS, production of coal-bed methane has little effect on the environment, however, are still expensive to develop. It is being regulated as though it were a deep-hole, high-pressured reservoir, when in fact; gas wells are more like low-pressure water wells.

NOW THEREFORE BE IT RESOLVED by the Wasilla City Council that support of HB 69 is to ensure the AOGCC has the authority and discretion to regulate such projects in an appropriate manner, suited specifically to the nature and characteristics of shallow nature gas development projects, while also providing for human safety and environmental protection.

ADOPTED by the Wasilla City Council on February 10, 2003.

Howard O'Neil
HOWARD O'NEIL, Deputy Mayor

ATTEST:

K L Smithers
KRISTIE L. SMITHERS, CMC
City Clerk

[SEAL]

Fact Sheet

Evergreen Resources Alaska & the Pioneer Unit

Evergreen Resources Alaska Corp is a Mat-Su Valley based independent energy company focused on exploring for coal bed methane gas in Alaska. In April 2001, we purchased the 72,000 acre Pioneer Unit from Unocal and Ocean Energy. This unit is located between the towns of Wasilla, Houston and Big Lake as shown in the figure to the right.

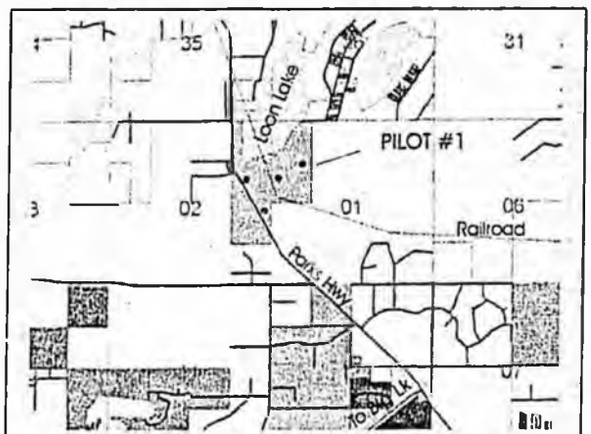
Pioneer Unit Boundary

Evergreen Resources Alaska is a wholly owned subsidiary of Evergreen Resources, Inc.. While the Alaskan subsidiary is less than one year old, the parent company was founded in 1981 and is headquartered in Denver, Colorado. We trade in the New York Stock Exchange under the symbol *EVG*. Our website address is www.EvergreenGas.com.

Our relationship with the community and with our landowner neighbors is extremely important to us. In our most active area, the Raton Basin of southern Colorado, we received several awards from the Colorado Oil and Gas Conservation Commission, specifically citing Community Relations. Last year, we also received the *Environmental Stewardship* award from Governor Tony Knowles who chairs the Interstate Oil and Gas Compact Commission. A former recipient is ARCO for their North Slope development. Evergreen is known for our ability to develop natural gas in close proximity to houses.

Our Plan

Evergreen plans to drill eight wells in the valley to explore for coal bed methane natural gas beginning in August 2002. These wells are separated in two groups called pilots with each pilot having four wells. One of the pilots is located 1.5 miles northwest of the intersection of the Parks Highway and the Big Lake Turnoff, as shown in the figure to the right. In this figure, the proposed well locations are shown as four black dots. This pilot area is located on a 148 acre parcel owned by a private party who has agreed to site wells on his property. Evergreen makes every reasonable effort to ensure that this exploration program imparts minimal impact to our neighbors.



Potential Pilot Location - black dots are well locations

Since we are permitting more pilots than are needed for this year's program, these wells may not be drilled in 2002.

Coal bed Methane

Coal bed methane is simply the extraction of methane gas from coal seams. The process of producing methane from coal consists of drilling, and completing wells – just like traditional oilfield operations – however, as you will see below, you may want to reconsider what natural gas development looks like. Evergreen is known for our low impact and environmentally friendly way we conduct our exploration. Methane is a gas and is the primary component of the natural gas that heats our homes, produces electricity and makes fertilizer and liquefied natural gas (LNG) on the Kenai Peninsula. Our targets are the Tyonek formation coals at depths from 1,000 to less than 3,000 ft.

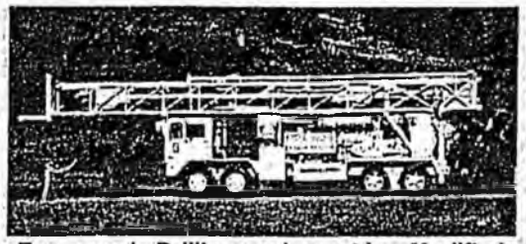
Site Preparation, Drilling, Completing, and Production Testing

Evergreen is recognized as an industry leader in coal bed methane exploration and development. We have developed one of the most successful coal bed methane plays in the Raton Basin of Southern Colorado. We plan to use our own state of the art drilling, cementing, completion and production equipment in Alaska. This equipment is designed for the specific requirements of coal bed methane and work is accomplished quickly and in an environmentally friendly manner. So that you know what is involved, described on the next page are the four steps involved with our program.

Fact Sheet (continued)

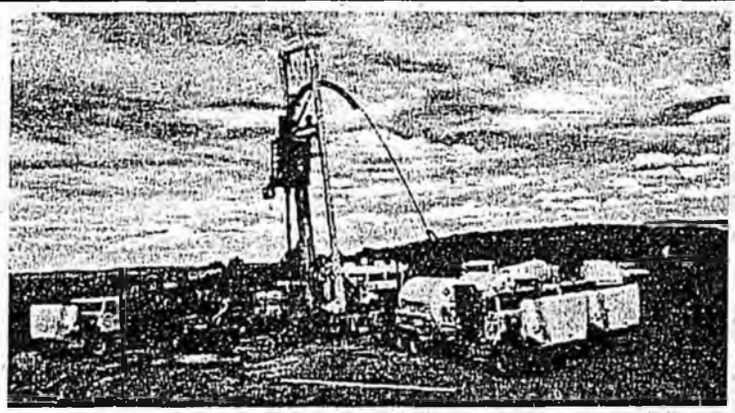
1. **Site Preparation** consists of clearing a 175 by 200 foot pad, digging a pit and lining it with impermeable plastic for the temporary storage of drill cuttings, and setting 12-inch steel conductor pipe to approximately 100-200 feet. This pad is a fraction of the size currently used in the industry. A local water well contractor will set the conductor pipe using air (versus mud) as the drilling fluid. Roads will also be constructed. This work will take roughly 4 to 5 days per site.

2. **Drilling** is accomplished using Evergreen's own high tech drilling equipment shown in the adjacent figure. As this photo illustrates, Evergreen's uses a modified truck mounted water well drilling rig, and not the derrick type rigs used in typical oil and gas operations. Air is used as the drilling fluid instead of mud. Evergreen's drilling times are roughly 3 days instead of 3 weeks/months required by derrick type rigs. For these reasons, neighbors view our drilling operations more like water well drilling than they do traditional oilfield operations. The shallow fresh water aquifer is completely protected using two strings of steel pipe sealed with cement. This is a 24-hour a day operation.



Evergreen's Drilling equipment is a Modified Water Well Drilling Rig

3. **Well Completion** is a process that allows the gas and water to be produced from the coals to the well bore. In this process, the coal seams are fracture stimulated (frac), a process where nitrogen gas, gelled water and sand are injected into the formation to enhance the well's ability to produce. Evergreen will utilize its own equipment to fracture stimulate the wells. By volume, the majority of the fluids pumped into the coals consist of inert nitrogen gas. The well completion process takes approximately 3 days per well, of which the frac takes approximately 9 hours.



Evergreen Frac Equipment – uses mostly nitrogen gas

4. **Production Testing** is a period of at least 9 months where we pump water from the well to determine how much gas is produced from the coals. We use a progressive cavity pump to bring the water from the coal to the surface where it is temporarily stored in above ground tanks. Water trucks will visit the site daily to remove the water from the tanks for disposal at an already approved injection well. A straight - six cylinder natural gas or propane motor will be used to power the pump. Noise emitted from this process is minimal – similar to that of an idling car. Due to winter operations, the engine will be enclosed in a small shed further reducing any noise. Small amounts of methane natural gas, typical for beginning stages of coal bed methane development, will be measured and vented to the atmosphere in accordance with state regulations. Some of this methane may be used to keep the well site locations from freezing. If the pump fails, we will change the pump using equipment similar to the drill rig.

Water Pump and gas Engine

Water Truck

More Information

For more information, contact Scott Ogan, Public Relations Consultant at 907-841-6259 or Bill Vallee, Consulting Landman at 907-333-1277 or John Tanigawa, Alaska Projects Manager at 907-841-0000 or 907-357-8130.

EVERGREEN

Well Location

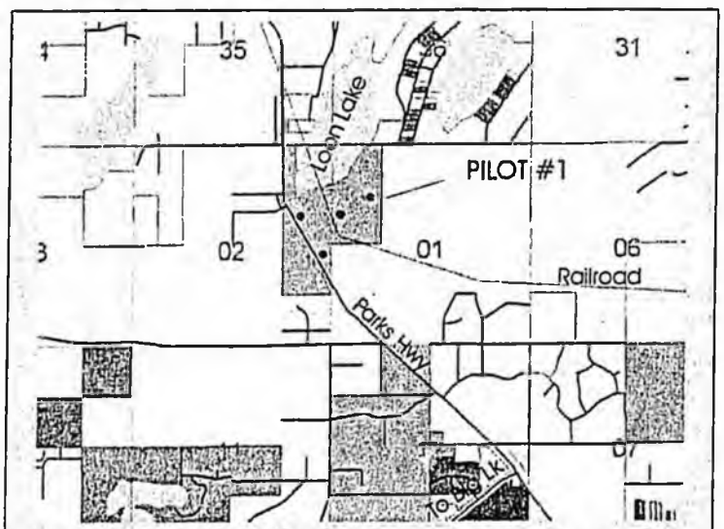
Pilot number 1 is located on a 148-acre parcel of land located in sections 1 and 2 of township 17 North and 3 West. The site is 8.5 miles west of the city of Wasilla and 3.5 miles Southeast of the city of Houston. This is 1.5 miles northwest of the intersection of the Parks Highway and the Big Lake Turnoff.

Shown on both maps are black circles or red rectangles showing the proposed well locations. We have spent time with the landowner and believe these locations are within 50 to 100 ft of their final position. These locations however, may be changed.

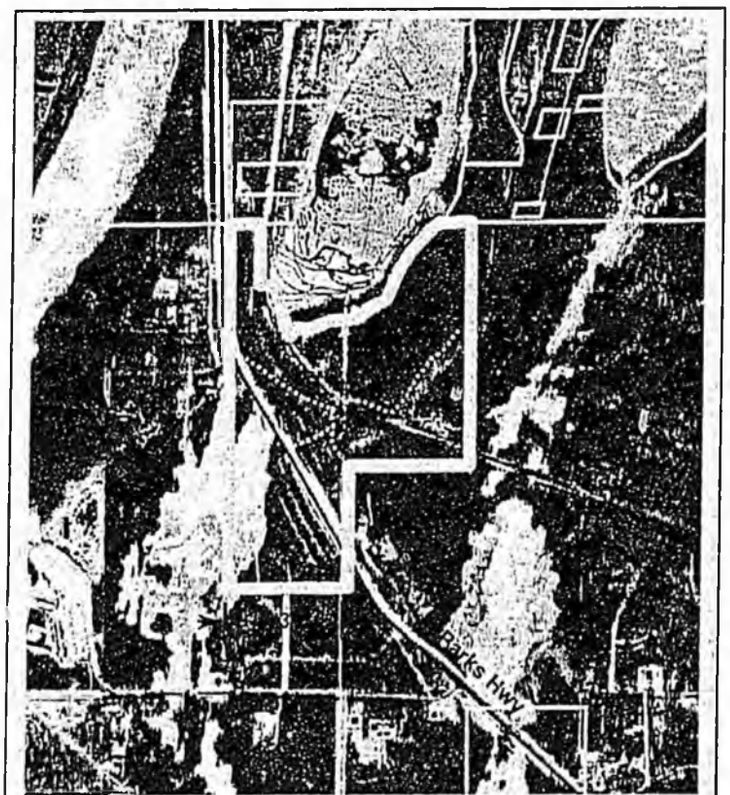
Of the four wells, two parallel the Parks Highway. Both wells will be placed roughly 225 feet from the centerline of the Parks Highway. This is roughly 75 feet in the trees. The remaining two wells, located in the west half of the northwest quarter of section 1, are positioned approximately 650 feet from Loon Lake. In all cases, trees will obscure these well pads from the public view. Further these spruce trees dampen noise that come from our operations. Wells will not be closer than 500 ft from the lake.

The figure to the right is a satellite image taken in April 2002 of the same area. In this image, well pads are shown as rectangles. Size of these rectangles is 200 feet by 175 feet. No wetlands, streams or lakes are disturbed by this activity. All activities are outside of the set back buffer to Loon Lake, which is located on the northern edge of the lease.

The light green lines are the existing yet unimproved roads on the property. Part of this road includes an orphaned railroad crossing. Evergreen plans to use all or a portion of these roads, however, actual access is at the discretion of the landowner. Access to this lease is from the Parks Highway, which runs through the lease.



Pilot 1 Mineral Ownership Map



Pilot 1 Satellite Image

Legal Description

W/2 of NW/4 of Section 1 township 17 north range 3 west (except for portions in Loon Lake)
E/2 of the NE/4 of Section 2 township 17 north range 3 west (except for portions in Loon Lake)
NE/4 of SE/4 of Section 2 township 17 north range 3 west, all are Seward Meridian.

Questions & Answers

Will my water well be affected by your exploration?
No. We set two strings of steel casing, sealed from top to bottom with cement, to ensure that your fresh water is protected. Further we drill with air to eliminate groundwater contamination.

What do you mean by the term "Exploration Wells"?
Exploration wells are designed to test the coal's ability to produce methane natural gas. During exploration, wells are drilled close together to minimize the time to testing period. Following the exploration phase, the wells will either be plugged and abandoned and the land recovered according to state regulations, or further exploration and development may occur.

Can Evergreen hook-up natural gas to my house?
No. Evergreen is not a regulated utility in the state of Alaska and we cannot sell natural gas directly to consumers. If the wells are economic, then we plan to sell natural gas to Enstar, the local gas utility.

Does the coal bed methane exploration make much noise?
No, not compared to conventional oil field operations. Since our drilling operations use water well drilling equipment, the noise that you hear is similar to a neighbor drilling a water well. The total time to drill each well is roughly 72 hours (3 days) and of that time, actual drilling occurs for 30-40 hours. When we complete wells, you will hear the diesel engines from our pumps for a total of 6 to 9 hours over a one or two day period. During production testing, you may hear the enclosed six-cylinder natural gas engine that powers our pump or a water truck that unloads water from the temporary water tank. Also during the testing period, you may hear us replacing a pump.

What does Evergreen do to protect the Environment?
Evergreen uses the latest equipment and technology to perform our work in an environmentally safe manner. To begin with, Evergreen uses newly developed air drilling technology. Using air, we eliminate the majority of the drilling wastes generated in the drilling process. We can also drill the wells much faster than conventional wells – on the order of several days instead of several weeks or months. Second, the amount of land we require in our activities is a fraction of the size required by conventional operations. With regard to our produced water, we inject it into a state approved water disposal well. Finally, we produce and use methane natural gas in our operations. Natural gas is arguably, the cleanest and most viable fuel source currently available.

Why is Evergreen the "Recognized Leader in Coal bed Methane Technology"?
Evergreen receives this industry recognition because of our success record developing coal bed methane. We receive awards for our ability to develop this type of resource in close proximity to developed areas. Further, we consistently lead the industry in several industry benchmarks including, lowest finding and development costs, highest reserve replacement through drilling, and highest full cycle economics.

Does Coal bed methane smell like some oil and gas operations?
No. Coal bed methane produces mostly methane. Methane is odorless, colorless and is lighter than air. This is very different from some conventional reservoirs that have hydrogen sulfide gas, or other aromatic hydrocarbons.

Can there be a blow out?
No. Evergreen employees specialized equipment to ensure that these wells remain in control at all times.

Can there be an oil spill?
No. No oil spill can occur since no oil is produced.

What is in it for me?
In the long run, locally produced natural gas will benefit the entire state, especially, the Mat-Su Valley. This gas source can replace the diminishing supply in the Cook Inlet. If our exploration program is successful, then development may mean more wells. Along with these wells come jobs, a diversified property tax base, and of course, more money to the State's Permanent Fund.

EVERGREEN

Valley gas wells show promise

CEO: Evergreen might double Cook Inlet reserves

By SCOTT CHRISTIANSEN
Frontiersman reporter

SCOTT CHRISTIANSEN/Frontiersman

Evergreen Resources CEO Mark Sexton talked to reporters at a drilling site in Houston last week. The company is excited about coal-bed methane prospects that Sexton said might double the known reserves for the Southcentral Alaska natural gas market.

HOUSTON — Last week Colorado-based gas driller Evergreen Resources Inc. made its biggest media push in Alaska since it started exploring for coal-bed methane in August with a visit from Evergreen CEO Mark Sexton and an invitation for reporters to visit a drilling site in Houston.

Sexton told reporters that Evergreen might double the amount of natural gas available for the Southcentral Alaska market. The company's target is methane gas inside coal seams that are generally shallower than 2,500 feet underground.

"We know that vast quantities of gas exist in these coal seams," Sexton said. "If we are successful, we'll be able to produce 50 percent of the gas [in the coal beds]."

The company holds 100 percent working interest in about 63,000 acres around Cook Inlet, acquired through deals with the state of Alaska, the Alaska Mental Health Lands Trust and two other energy companies — UNOCAL and Ocean Energy — that previously acquired gas rights in the area. Evergreen specializes in coal-bed methane, which industry publications call easy to find but difficult to produce.

Sexton — who once worked for Amoco — told reporters that it's not uncommon for large energy companies to fail at coal-bed methane production only to have a smaller specialist such as Evergreen follow in their tracks and succeed.

Evergreen's Alaska Projects Manager John Tanigawa has been in the state for two years and has been making presentations to local community groups and working on permitting with the state of Alaska. Tanigawa said community members often want to know if the gas wells will affect surface water — such as Loon Lake just north of last Wednesday's media tour— or affect the water tables that homeowners' wells draw from.

"Shales are impermeable, meaning that you can't flow water through them," Tanigawa said. "There exists several shale zones in between the fresh water aquifers and where we are [prospecting for gas] ... The proof is in the pudding. Loon Lake is still unharmed, and nobody's ground water has been effected."

The subsurface layers are made up of gravel, shale and coal, according to Tanigawa, who said the layers alternate but that there is no particular pattern to their sequence. Tanigawa said Evergreen has drilled a water monitoring well with each pilot well cluster.

So far, the company has drilled eight wells in two pilot clusters as was required by the state when Evergreen acquired gas leases. The real answers as to whether or not Evergreen will produce gas at a profit will come next spring when the company completes the exploration wells.

To complete each well, workers will fracture the coal seams by pumping a nitrogen-based foam down the well under pressure. The fractures will extend several hundred feet from the well. Foam is then used to carry sand down the well and fill the fractures so they won't collapse.

Coal-bed methane gas sometimes exists in a deep water table similar to the way carbonation gas exists in beer. A pump placed deep in the well will be used to draw the gas/water mix up the well. Company officials say the wells can't blow out. Wells at Evergreen's successful Raton Basin field in southern Colorado run at pressures as low as 10 psi, according to Sexton.

Evergreen's permits allow the company to drill to 3,000 feet. Sexton may not know for sure if the wells will be profitable yet, but he's excited about the Susitna Valley prospects and the information gleaned so far.

"There's 80 to 150 feet of coal in these wells, which is plenty to work with," Sexton said. " ... The potential exists for this to be really big, to double the known reserves."

If Evergreen is successful, the company plans to market the gas locally to Enstar or other utility companies.

Sexton was also one of a group of presenters at who spoke about new prospects for Alaska at the annual conference of the non-profit business organization Resource Development Council for Alaska in Anchorage last week.

The Frontiersman 11/24/02

FEB 24 2003

RESOLUTION 03-03

A RESOLUTION OF THE COUNCIL OF THE CITY OF HOUSTON, ALASKA IN SUPPORT OF HOUSE BILL 69 "AN ACT RELATING TO THE REGULATION OF SHALLOW NATURAL GAS LEASING AND CLOSELY RELATED ENERGY PROJECTS; AND PROVIDING FOR AN EFFECTIVE DATE".

WHEREAS, HB 69 is legislation that clarifies the Alaska Oil and Gas Conservation Commission's (AOGCC) authority to regulate the state's shallow and unconventional natural gas resources, including allowing for variances from AOGCC's general regulatory requirements in certain cases. Alaska possesses tremendous shallow natural gas resources, such as shallow coal bed methane gas. Production involves extraction of methane gas from coal deposits lying at relatively shallow depths of about 3,000 feet. In Cook inlet alone, there is an estimated 1.5 trillion tons of coal, with an estimated 200 trillion cubic feet of coal bed methane. Two hundred trillion cubic feet of gas is enough to supply U.S. natural gas requirements for more than eight years. The entire state has coal-bed methane resources estimated at 1,000 trillion cubic feet, not including natural gas from tight sands also in place across Alaska; and

WHEREAS, statewide, these resources are abundant and widely distributed. They hold the promise of bringing a much cleaner, locally-produced alternative energy source to areas of rural Alaska long dependent upon diesel or fuel oil barged in from distant sources for heat and power. Production of coal-bed methane and other forms of shallow natural gas development also has little effect on the environment. A typical well is drilled in two to three days, and advanced drilling technology uses simple air to drill a well , greatly reducing drilling wastes. Further, wells are lined and cemented from top to bottom which protects groundwater, and has no oil is present, there is no risk of a oil spill. Once in production, the "footprint" of a typical well is less than one acre. ; and

WHEREAS, despite such promise and benefits, shallow natural gas and coal bed methane are still expensive to develop. Such projects are very sensitive to development and production costs which include the costs of safety and excessive regulations. Shallow

natural gas is being regulated as though it is a deep hole, high-pressured reservoir such as on the North Slope. In fact, shallow gas wells are more like low-pressure water wells that produce gas.

NOW THEREFORE BE IT RESOLVED that the Council of the City of Houston, Alaska supports the purpose of HB 69, which is to ensure that the AOGCC has the authority and discretion necessary to regulate such projects in an appropriate manner, suited specifically to the nature and characteristics of shallow natural gas development projects, while also providing for human safety and environmental protection.

ADOPTED by a duly constituted quorum of the Houston City Council this 13th day of February, 2003

Dale Adams, Mayor

ATTEST:

Daleann Pond, City Clerk

ALASKA MUNICIPAL LEAGUE
Alaska Conference of Mayors

217 Second Street, Suite 200 • Juneau, Alaska 99801
Tel (907) 586-1325 • Fax (907) 463-5480 • www.akml.org

March 27, 2003

The Honorable Fred Dyson
State Senate
State Capitol
Room 121
Juneau, AK 99801

Re: Senate CS for House Bill No. 69 (B)

Dear Senator Dyson:

As per your request, I am writing to reiterate, and perhaps better explain, the Alaska Municipal League's (AML) concerns regarding the Senate CS for House Bill No. 69 (B), specifically as it relates to AS 35.30.020 and AS 35.30.030. While this bill only applies to the leasing of shallow natural gas, it preempts local government control of land use planning, zoning, and even subdivision ordinances, thereby setting a dangerous precedent.

According to AS 35.30.020, "a department shall comply with local planning and zoning ordinances and other regulations in the same manner and to the same extent as other landowners." If, according to AS 35.30.030, however, the department "clearly demonstrates an overriding state interest, waiver of local planning authority approval and the compliance requirement may be granted by the governor." This waiver is granted only after the governor issues "specific findings giving reasons for granting any waiver."

As written, Sections four and five of the Senate CS for House Bill No. 69 (B) would allow the state to reserve "unto itself all rights and powers not preempted by federal law and regulation in the regulation of exploration for or development of unconventional natural gas." Unlike the language cited in AS 35, the language proposed in the Senate CS for House Bill No. 69 (B) would allow the state to preempt local land use planning and zoning authority without first (1) demonstrating "an overriding state interest;" (2) requiring the governor to "issue specific findings;" and (3) a waiver issued by the governor. This language essentially gives the state complete authority over the regulation of exploration for or development of unconventional natural gas. Although analogous to language already in AS 35, the proposed language goes beyond the rights afforded to the state in AS 35 by clearly expanding the state's authority and eliminating municipal planning and zoning authorities as they relate to shallow natural gas.

AML commends your efforts to facilitate economic development. However, AML must oppose this legislation because it would override a community's right to exercise area-wide planning, platting, and land-use regulation functions.

Sincerely,
Sarah A. Gilbertson
Sarah A. Gilbertson
Policy and Program Coordinator

House Bill 69
Shallow Gas Drilling

810 N St, Ste 203, Anchorage Alaska 99501 / Ph. 907.258.6171 / Fax 907.258.6177
PO Box 22151, Juneau Alaska 99802 / Ph. 907.463.3366 / Fax 907.463.3312 / www.acvoters.org

To: Senators
From: Matt Davidson, Conservation Advocate
Date: April 22, 2003
Subject: Deregulating Shallow Gas- HB 69

Shallow gas production has a huge development potential across the state, however without proper safeguards these activities pose serious threats to Alaska's ground and surface waters, public and private lands, and communities. The shallow gas drilling industry has used HB 69 to undercut public process and proper oversight.

Currently, HB 69 erroneously implies a lack of impacts, fails to instruct state agencies to adopt necessary regulations to avoid these impacts, while specifically removing public notice of industry requested variances and removing state and local oversight through Coastal Zone planning.

HB 69 should be amended to:

1. **Recognize the true impacts of CBM development in the *Findings* section.**
2. **Require agencies to develop specific regulations dealing with these impacts.**
3. **Sunset the current open-ended regulation variance provision.**
4. **Delete the public notice exemption.**
5. **Delete the exemption from Coastal Zone review.**

CBM Production Problems in the Rocky Mountain States:

1. High salinity in discharge water making it unusable for irrigation and drinking. There is no EPA standard for salinity discharge.
2. Noise pollution from compressor stations around homes, public buildings, and schools.
3. Rise in groundwater levels from the reinjection of extracted water.
4. Draining of public and private water supplies from shallow gas production.
5. Wastewater stored at surface leaching into nearby rivers and streams damaging stream ecology and fisheries.
6. Damaging property values, and scenery due to abandoned or idle wells.

Shallow gas development has the potential to provide energy to rural communities. If not done responsibly, however, development may also have large negative impacts on communities and our natural resources.

Please oppose SCS HB 69(RES).

Alaskans building a better future.

Alaska Conservation Voters
Alaskans Building a Better Future

810 N St, Ste 203, Anchorage Alaska 99501 / Ph. 907.258.6171 / Fax 907.258.6177
PO Box 22151, Juneau Alaska 99802 / Ph. 907.463.3366 / Fax 907.463.3312 / www.acvoters.org

March 7, 2003

To: Senator Dyson
From: Matt Davidson

At your request, I have provided a few examples of the impacts of coalbed methane production in western states. Some of the most dramatic impacts include methane seepage into adjacent aquifers as wells are dewatered, drained aquifers, high salinity levels in surface waters, and surface damage from wells that discharge water on the land surface near the wells or into existing stream or river channels.

Now is the time to avoid these problems by enforcing standards and regulations specific to coalbed methane drilling in Alaska.

1. High levels of salinity can severely damage a farmer's crops. The "quite fresh" water Montanan farmers are told to use contains saline and sodium levels that are too high for irrigation. As the article explains, there are no federal drinking water standards for saline and sodium and therefore the water is considered "fresh."

2. A business and property owner in Wyoming write the next article. He lost his well due to the dewatering process of a coal seam, which drained his aquifer. He was also forced to install a new leach field because of the high groundwater levels caused by CBM discharge.

3. Article by Wyoming resident who was told by the State of Wyoming not to light a match near his water source, forced to live with constant noise pollution and his wife developed severe asthma from air pollution created by the drilling.

4. The last two articles cite specific examples of methane seepage into domestic water wells and high levels of methane in soil gas samples in Wyoming and Colorado. The residents of Rawhide Village subdivision in Gillette, Wyoming were forced to abandon their homes due to methane gas seepage into their houses.

Thank you for your interest and concern. If you have any further questions please contact me.

Sincerely,

Matthew Davidson

Alaskans building a better future.

#1

Western Roundup

High Country News -- December 27, 1993 (Vol 25 No. 24)

Andrew Council/Durango Herald
Homeowner Glen Watson watches natural gas bubble in the Pine River

Methane creates an explosive situation in Colorado

Last summer, Kelly and Randy Ferris noticed that the tap water in their Bayfield, Colo., home had begun to sparkle and fizz.

But it wasn't Perrier. It was methane gas. Bureau of Land Management tests this fall found that the Ferrises' water well is "super-saturated" with methane, and that the explosive gas is seeping into their home. Some of the neighbors' wells are also suddenly polluted, and the Pine River in front of their subdivision is bubbling methane, says Kelly Ferris. "My husband went down and you can light the river with a match."

Discovery of the problem in early November set off fire alarms in southwest Colorado's La Plata County, which sits above one of the largest gas-producing formations in the nation. County sheriffs and the Bayfield Volunteer Fire Department fanned out through the Bayfield area Nov. 10 to notify residents. Spot tests turned up several more polluted wells and flammable gas levels in one house.

Methane gas is invisible, odorless and tasteless. County officials say it's not harmful to drink or breathe, but if the gas accumulates in confined spaces, it can explode. The county is warning residents not to shower in unventilated rooms, and most have gone on bottled water. Meanwhile, crews are testing water wells in other parts of the county.

The Bayfield leaks are the latest in a history of methane problems in La Plata County, Colorado, and in the San Juan Basin in New Mexico - an area that in the last five years has become the second largest gas-producing region in the country. Since 1988 dozens of homeowners throughout the county and down into New Mexico have complained of foul-tasting and flammable tap water - problems they blamed on nearby drilling for coalbed methane gas. They have been backed by warnings from the Environmental Protection Agency in 1990, and the U.S. Geological Survey in 1992 that coalbed gas production may be polluting shallow aquifers and residential water wells.

But the regulatory agencies - the Colorado Oil and Gas Conservation Commission, the New Mexico Oil and Gas Division and the BLM - say there is not enough evidence to halt gas production. The agencies say the gas seeps are probably natural, and may pre-date oil and gas drilling. After their attempts to get a basin-wide environmental impact study were rejected in 1992, some 200 residents filed class-action lawsuits against gas companies in both states, charging property damage and negligence (HCN, 4/19/93).

Now the La Plata County commissioners have joined the fight, accusing the Colorado Oil and Gas Conservation Commission of disregarding the safety and welfare of local residents. In a statement released Nov. 16, the county called for a basin-wide environmental impact study, an immediate

moratorium on new gas wells and reform of the state commission.

"The Oil and Gas Conservation Commission has historically been a handmaiden of the oil and gas industry," said La Plata County Commissioner Shirley Baty. "The environmental stakes are too great - and human lives too dear - to risk a half-hearted approach by the OGCC."

Jack Campbell, one of six directors of the statewide Oil and Gas Commission, and a professor at Fort Lewis College in Durango, responded in the Durango Herald that the county was being unnecessarily confrontational, and "jumping up and down like idiots." The problem, say county officials and local residents, is that neither the state commission nor the gas companies have adequately studied the impact of the new coalbed methane technology developed for the San Juan Basin.

Conventional gas drilling taps into pockets of gas trapped like air bubbles underground. But in the San Juan Basin, methane gas molecules are bound to coal molecules in the vast coal seams that underlie the basin. These coal seams are immersed in water under pressure. The higher the water pressure, the more gas the coal holds.

To produce gas, companies drill into the coal formation and pump out water. That lowers the water pressure and "liberates" the gas molecules, which then flow up the well bore. Since 1989, the industry has drilled almost 800 coalbed methane wells in La Plata County and 2,500 more in New Mexico. According to the Colorado Oil and Gas Commission's most recent figures, by 1991 gas companies had pumped over 23 million barrels of water from underground in La Plata County.

Andrew Council/Durango Herald

Attorney Ed McCord says Amoco diagrams show how drilling in coalbeds can allow methane to escape to the surface or into the groundwater

County officials and many local residents suspect that the pumping may have changed underground water pressure across large areas, freeing gas to migrate through natural cracks and fissures and residential water wells. They also point to a 1989 internal BLM memo warning that while new coalbed gas wells may be sound, the drilling activity may be causing new leaks in the estimated 15,000 old and abandoned gas wells scattered across the basin.

As a case in point, county manager Bob Brooks says that Bayfield residents did not have a methane problem until Amoco drilled 10 coalbed gas wells in the area between three and five years ago. Fearing that those wells had triggered a mass release of underground gas, in mid-November the county asked the state Oil and Gas Conservation Commission to shut down all 10 wells and begin a basinwide environmental impact statement.

"The OGCC should have required the industry to prove beyond the shadow of a doubt that there would be no damage to ground or surface water prior to the first (coalbed methane) well being drilled in the San Juan Basin," reads a county statement issued Nov. 16. "Now there are over 2,000 (conventional and coalbed methane) wells in La Plata County and, to date, no requirement has been made to prove that ground and surface water will not be negatively impacted."

Brooks adds, "A lot of areas in the county have gone from no measurable methane in their water wells to the saturation point."

For the first time in the five-year debate, the staff of the Colorado Oil and Gas Conservation Commission backed the county. Rich Griebling, the staff director of the commission, hand delivered a letter requesting Amoco to shut down its 10 Bayfield wells.

Amoco refused and, to the surprise of everyone, the Oil and Gas Commission - five industry experts and one citizen representative appointed by the governor - rejected its staff recommendation. Instead the commission approved an alternative proposed by Amoco. Beginning next year the company will shut six of its Bayfield wells, one by one, and monitor the gas leaks and changes in pressure underground. If a link is established between gas production and contamination of the water wells, the gas wells will be shut down and the commission will then authorize further studies.

County officials say they are "shocked," and have asked Gov. Roy Romer to fire Campbell, the area's local representative on the state commission, and push for broader studies of oil and gas issues in the basin.

The county's protest has gotten statewide coverage and hits the Oil and Gas Commission at the end of a bad year. The commission barely survived a bruising attack from environmentalists in the state legislature last winter, and has been besieged by angry complaints from farmers and county officials in Weld County, north of Denver. Recently, a coalition of environmental and citizen groups announced they will put an initiative on the 1994 ballot to reform the commission (HCN, 11/1/93).

The pressure is having an effect. Romer and Department of Natural Resources head Ken Salazar - still smarting from last year's Summitville mining disaster - have scrambled to pull the commission into line. Romer sent Salazar to the commission, where he made a long speech asking it to act to regain public credibility and prevent property or environmental damage.

Meanwhile, Salazar, who has the authority to hire and fire staff of the Oil and Gas Commission, replaced the director, deputy director and supervising engineer last summer. The new director and supervising engineer have met with county officials and have formed a local task force to monitor the gas leaks and direct further studies. In addition, talks are under way about replacing Campbell.

Romer has also asked for a meeting of the BLM, the Colorado Oil and Gas Commission, the New Mexico Oil and Gas Division, La Plata County, the Bureau of Indian Affairs and the three Indian reservations that share jurisdiction over oil and gas drilling in the San Juan Basin. Romer wants the group to revive a 1991 agreement to survey all existing studies of gas drilling in the basin, and identify any new studies needed to protect residents and the environment.

However, Romer has not asked for a moratorium on new gas wells, or for cutbacks in operation of existing wells.

- **Steve Hinchman**, HCN staff reporter

#2

provide the community with steady, long-term income, not the boom/bust cycle.

As a mineral owner, it would be nice to have minerals developed on my land that could benefit my family for generations to come. I believe that with a very carefully crafted DEIS this actually could come about. I am working toward that goal and I ask that you do the same.

Nancy Sorenson, Rancher

Business Owner Struggles With CBM

My name is Phil Hoy. I moved to Gillette in 1972, where I have a welding shop and a 56-space mobile home park 6 miles north of town. I am in the middle of both coal mining and coalbed methane development. When I lost my water well to the dewatering of a coal seam that sucked the aquifer dry, I didn't know what had happened. I was forced to drill a new well at my own expense. I appealed to PRBRC for help, and was advised to pursue the Eagle Butte coal mine for remediation, because federal law stipulates that coal companies must replace affected or depleted water wells on adjacent properties. As it turned out, the investigation by WY-DEQ revealed that my well was lost due to a combination of the coal mine and coalbed methane dewatering. With this finding the mine and CBM companies agreed to pay for the cost of the well and its feeder lines and I was paid back for my out-of-pocket expense. Afterwards, I agreed to sign a release of liability for loss of the water well with both the coal company and the coalbed methane company. This created a huge problem because the wording of the water well liability release also released the CBM company from future liability for property damages which have occurred and are continuing to occur on my property.

In 1999, I had to install a new leach field on my property because the existing field had become filled with water due to high groundwater levels caused by CBM discharge, and could no longer accept effluent. In 1985 when the leach field had been modified, ground water measurements showed that the water level had been at 10 feet. The initial ground water measurement when building the leach field was at 17 feet. In late June of 2000, I hired Walt Merschat of Scientific Geochemical Services to do an assessment of the situation, and on June 29th, the water table was found to be at 31 inches adjacent to the leach field. Walt Merschat also observed standing water in low areas of my property, a white "crust" of non-effervescent material on the red scoria of the parking lot and driveway, and springs and swamps not shown on topographic maps, which indicated to him that the changes in groundwater volume and flow had been recent.

This time it turned out that the shallow alluvial sands on my property were being flooded by the discharge water of the same coalbed methane company operating to the south of me. Between 1997 and 2000, the company (which was Barrett at the time) discharged 525.24 acre-feet, or 163 million gallons of CBM water into Little Rawhide Creek. The water "superabsorbed" and began traveling laterally down gradient to my property. I called the Wyoming DEQ about the flooding problem, only to be told there was nothing they could do to stop the discharge, because it was considered a beneficial use of the water. DEQ also informed me that the agency dealt with water quality problems but not water quantity problems. Besides having to replace my leach field, property damages have included the roof of my house splitting and separating, the cement in my shop heaving and cracking, the blocking and skirting of some of the trailer houses water-damaged, trees, shrubs and grass killed by excess standing water, and white mineral

groundwater to be sometimes as high as 30 inches.

Walt Merschat concluded that the excess water from Barrett's discharges had been percolating into the Wasatch sands, which caused the high ground water levels that resulted in the failure of my leach field and the accompanying structural damage. Merschat recommended modifications in the upstream reservoir to normalize the groundwater state, and a trench or interceptor ditch downstream to lower the water table.

In November of 2001, Williams (formerly Barrett) expanded a reservoir south of Hannum Rd. on private property, which diverts CBM water, natural stream flow, and floodwaters from a mile section of Little Rawhide Creek. The spillway for the reservoir was pointed directly toward my property, allowing more water to filter into the shallow sand alluvium and increasing the probability of flooding me out. The reservoir expansion included the deepening and cleaning out of sediment, which compounded and contributed to more percolation of CBM water into the shallow groundwater aquifer. I filed a formal protest of the reservoir with the State Engineer's office, requesting that they not issue a permit without addressing remedies, such as a liner for the dam and spillway, changing the direction the spillway faced, a drainage ditch or overflow pipes. The State Engineers office responded that they had no control over downstream problems created by the reservoir and that it was beneficial to wildlife and livestock; they also claimed they had no authority to require modifications to the reservoir to stop it from damaging my property.

I have been in continual contact with numerous governmental agencies and specialists in order to find and get resolution to these problems. There have been numerous site visits to my property by governmental agencies to view the damage and the data I have collected on the water tables. These agencies, specialists and individuals agree with my findings on the cause of the problem, but to date no action can or is being taken due to the inadequate water laws of the State of Wyoming.

It appears that the regulatory agencies of the State of Wyoming can allow industrial development without regard to private individuals' property or lifestyle. Isn't it a travesty that the State of Wyoming will not act to protect its people but will act to benefit livestock and wildlife? It appears that CBM companies don't care and are not responsible for the problems that they create or damage that they do. We know of no other industry or development or individual that is allowed to proceed in this manner. What will be done to protect affected businesses and citizens of Wyoming from this industry? We would like to see RESPONSIBLE coalbed methane development!

Phil Hoy
Business Owner and PRBRC Board Member

CBM Water and Soils

According to the Bureau of Land Management, 51,000 new coalbed methane (CBM) wells may be drilled in the Wyoming portion of the Powder River Basin (PRB) over the next 15 years, while 30,000 wells may be actively producing at one time. CBM extraction requires pumping water from the coalbed aquifers to de-pressurize the system and to allow the methane to de-adsorb from the coal surfaces. After the area is de-pressurized, the CBM is collected for processing.

Since a single well initially produces approximately 15,000 gallons of product water per day at a rate of approximately 10 gallons per minute (and this production occurs steadily 365

#3

hold our elected officials, regulatory agencies, and the mineral corporations to the highest standards when they seek to exploit the resources that lie beneath. It is not jus our right; it is our duty.

Nancy Sorenson
PRBRC Chair

Montanans Concerned About CBM Wastewater

While development of coalbed methane is a contentious issue, there's one aspec that's bringing people together rather than driving them apart: namely, protection of irrigation water from coalbed methane wastewater.

Southeastern Montana irrigators - those of us who live at ground zero for coal bed methane development - have proposed sodium and salinity standards for rivers that will receive coalbed methane wastewater.

As an irrigator and manager of the Tongue and Yellowstone Irrigation District, I helped develop the irrigators' proposal, along with the Tongue River Water Users' Association, Buffalo Rapids Irrigation Project and Northern Plains Resource Council. We figured that we, better than anyone, know what it will take to protect our irrigation water.

Our common-sense solution has garnered the support of irrigation and farm groups; fishing and hunting organizations; Main Street businesses (including Stockman's Bank, Montana's largest agricultural lender); government agencies (Montana Fish, Wildlife and Parks); and the Billings Gazette, to name a few.

In fact, there aren't many folks out there who are against our proposal. That's because we all understand that Montana's future depends on using our natural resources responsibly. If we can figure out a way to do it right, everyone wins.

There is one vocal group of opponents to our proposal: the coalbed methane industry. Coalbed methane companies, such as MDU Resources and Marathon Oil, say they'd rather things stay the way they are. They say that coal- bed methane wastewater is "quite fresh," and that it meets all federal drinking water standards.

What they don't tell you is that there are no federal drinking water standards for sodium and salinity - the two most worrisome parameters.

They also don't mention that their "quite fresh" methane waste water contains 40 to 60 times the relative amount of sodium in the Tongue River, a river that supports 30,000 acres of irrigated cropland.

Sodium destroys soils structure - for the long term.

There is no mystery about what the discharge of this waste water would do to our rivers: It would render the Tongue, Powder, Little Powder and Big Horn rivers, as well as Rosebud Creek, unusable for irrigation. That's according to the state and federal governments, as outlined in the Draft Environmental Impact Statement. These rivers support tens of thousands of acres of irrigated cropland and nearly 10,000 farm-sector jobs.

I had the opportunity to discuss this issue with Montana Gov. Judy Martz while she toured my family farm and the T&Y Irrigation District in late September. I asked her to support the irrigators' proposal. I pointed out that Montana's future depends on using natural resources responsibly, and that agriculture is our No. 1 industry. Gov. Martz agreed that we need to protect irrigators, but said she'd need time to consider our proposal.

On behalf of the irrigators who developed the irrigators proposal and the over 50,000 acres of irrigated cropland we cultivate, I respectfully

ask Gov. Martz again for her support. Now, more than ever, we need her leadership to help protect our irrigation water.

Roger Muggli

Roger Muggli and his family run Muggli Brothers, a family farm and pellet feed plant in Miles City. He is the Manager of the Tongue and Yellowstone Irrigation District and member of the Northern Plains Resource Council's Coalbed Methane Task Force. He sits on the Operating Board for the Tongue River Reservoir.

CBM Destroys Retirement Dream

Let me share with you my first impression of Gillette when I got off the airplane in Gillette 14 years ago. I came here for a job interview for a position at the Northern Wyoming Community College, Gillette Campus operated by Sheridan College. It was a beautiful day. I felt so good about being here I was hoping that after the interview they would offer me the college position. Before I boarded the plane the next day to go back to Wisconsin I was offered the job. Needless to say, I was thrilled.

During that short visit back in 1987 I experienced my first contact with methane. Campbell County was evacuating Rawhide Village due to a severe methane problem. At that time a total community was uprooted and forced to move. I knew right then that after I returned to Gillette with my family, I would buy a house and property as far away as possible from Rawhide Village. I ended up buying a house and 20 acres in a rural subdivision 10 miles west of Gillette. We bought the house and property with the idea that this is where we would live after I retired. After working for the college for 12 years I retired and have been so for two years. During the first ten years living in our home we were very happy. Even though we only have 20 acres of sagebrush, we felt very blessed living with nature and the peaceful, quiet surroundings. Then it started. They began drilling for methane east of me. My first thought was what was going to happen to my water well when they removed all the water from underground. I and others met with three producers and each one assured us that nothing would happen to our well water. We in the subdivision have our own individual wells. Right now I still have water; however, although I had good water for over 10 years I started to get methane in my water after they started drilling. Coincidence? I think not. I thought in my mind about the methane that closed down Rawhide Village. The methane got so bad in my well that the hose I used for filling the horse tank with water would blow out of the tank unless I held on to it. And I can tell you one thing: You never wanted to flush the toilet while you were sitting on it! Humor helps but when the State of Wyoming told my wife not to light a match near the source of water, humor quickly left. I talked to the methane producer and was told they would be happy to monitor my well; however I would just have to prove they were the cause of the problems. Let me ask you, how can someone living on Social Security and a small Wyoming retirement benefit afford to challenge the producer? I definitely could not. Although the methane in the water has now subsided considerably (not ended but subsided,) I feel our retirement home has been down graded.

Now comes the second phase. The dreadful noise generated by a nearby large compressor station. Noise that was so loud that our dog was too frightened to go outside to do his business without a lot of coaxing. Noise that sounds like a jet plane circling over your house for 24 hours a day. Noise that is constant. Noise that drives people to the breaking point. My neighbor called the sheriff, state officials and even the governor and was told nothing could be done about the noise. Like I said, the noise drives people to the breaking point, and my neighbor fired 17 rifle shots toward the station. Unfortunately he received a lot of grief for his actions; however he got the company's attention. And after many telephone calls and after numerous letters by various neighbors (and eight months later) the company owning the compressor station finally made some modifications to the compressor station to help alleviate some of the noise. However the noise is still a problem for a number of the neighbors. The company also planted 40 small trees around the station to create a sound barrier. I am already retired and at my old age do you really think 40 trees are going to help me? One methane producer using the compressor station said the noise wasn't so bad. Of course he doesn't live anywhere near it. The going phrase right now is that we all need to be good neighbors. In order to be a good neighbor I am being asked to accept the current noise level for the good of the industry and what the industry is doing for the State of Wyoming. All I can say is that my retirement home has taken one more step down for the worse.

Now I want to share with you one final event that has shattered our dream of living in our retirement home. A dream that began 14 years ago, when my wife and I moved to Gillette. We are finally licked. Last year my wife suffered severe asthma attacks on four different occasions. Even with medication and the use of a Breathalyzer she nearly had to go to the hospital emergency ward to get help to breathe. Why is this happening now and not before CBM development? It's because during the height of CBM development when you looked over the valleys surrounding our home and Gillette, you didn't see the clean air that once existed. I don't have time to go into details about the problem, but I can tell you I was so thankful for the recent moisture and wind to help clean the surrounding air we breathe. I cannot and will not allow my wife to suffer like she did last summer. My retirement home in the rural subdivision is now useless to me.

I can now relate to all those families that had to evacuate their homes in 1987 due to methane. However where they didn't have a solution to their problem, my problem with water, noise and air pollution could have been alleviated with advanced planning by industry in cooperation with the State of Wyoming. Guidelines would have been established to allow them to drill and ship in a responsible manner this valuable resource that exists in the Powder River Basin. I feel it isn't too late to establish these basic guidelines for the well being of ALL the citizens of Wyoming. We as citizens all have the right to enjoy the good life this great state has to offer. Right now that isn't the case for me. Thank you for allowing me to share with you my experience with methane while living in a rural subdivision.

Ron Moss
PRBRC Member
(Ed. note. Due to the conditions caused by CBM, Ron and his wife are leaving Wyoming.)

Interior Board Of Appeals Lambasts BLM

#4

Environmental Issues And Challenges In Coalbed Methane Production

J. Belton Fisher
Exponent, Inc
Tulsa, OK

Methane Venting

The movement of methane from coal reservoirs to the shallow subsurface, and through the surface, is of substantial environmental concern. Seeping methane can disturb and contaminate shallow groundwater, kill vegetation, and produce a fire and explosion hazard within structures. Seepage *can* take place through natural fractures, in uncemented annular spaces behind existing well casings, through water wells, and through improperly abandoned oil and gas or mineral exploration wells.

A recent infamous instance of CBM seepage was the subject of a civil action in the late 1980s by residents of the Rawhide Village subdivison, located about 10 miles north of Gillette, Wyoming, against AMAX. In their open-pit mining operation immediately adjacent to the Rawhide Subdivison, AMAX removed overburden and then began dewatering the Ft. Union Coal. Shortly after dewatering began, Rawhide Subdivision residents noted gas seeping into their homes." Based on field and laboratory investigations, it was determined that the entire subdivision was underlain by potentially explosive concentrations of methane.[44,45] The Rawhide Village subdivision was subsequently abandoned.

In the San Juan basin, increases in the methane content of soil gas overlying Fruitland coal bed subcrops, alignment of recently killed vegetation with underlying coal subcrops, and an apparent intensification of naturally occurring methane/hydrogen sulfide seeps have all been noticed since the early 1990s. Chemical and isotopic analysis of soil and groundwater methane suggests that methane found in these soils and groundwater originated in the Fruitland Coal, but the long history of natural seepage of natural gas in the San Juan Basin[46] makes problematic an assertion that gas seeping into the shallow subsurface in this area is the result of CBM development.

In the San Juan basin, as early as 1980–1985, new seeps not associated with basin-rim outcrops, but interior to the Basin, were found in pastures in the Animas River Valley south of Durango near Bondad, Colorado and Cedar Hill, New Mexico.[47,48] Rural

---

[43] Jones, R.W., and Taucher, P.J. 1989. Coal geology, geophysical logs, and lithologic descriptions from a drilling program at the Rawhide Village subdivision, Campbell County, Wyoming. Geological Survey of Wyoming Open-File Report 89-2, 59 pp.

[44] Glass, G.B., Jones, R.W., and De Bruin, R.H. 1987. Investigation of the potential for near-surface explosive concentrations of methane to occur in the Rawhide Village Subdivision, Campbell County, Wyoming. Geological Survey of Wyoming, report for the Wyoming Department of Environmental quality (unpublished).

[45] Jones, R.W., De Bruin, R.H., and Glass, G.B.. 1987. Investigations of venting methane and hydrogen sulfide gas at Rawhide Village, Campbell County, Wyoming, *in* Rawhide II Project Report, Appendix I. Geology. Geological Survey of Wyoming, Laramie, Wyoming (unpublished), 23 pp.

[46] Bureau of Land Management, San Juan Field Office. 1999. A brief history and environmental observations, a working document. http://oil-gas.state.co.us/blm_sjb.htm.

[47] Shuey, C. 1990. Policy and regulatory implications of coal-bed methane development in the San Juan Basin, New Mexico and Colorado, *in*: International Symposium on Oil and Gas Exploration and Production Waste Management Practices, 1st, Proceedings, New Orleans, pp. 757–769.

[48] Beckstrom, J.A., and Boyer, D.G. 1991. Aquifer protection considerations of coalbed methane development in the San Juan Basin, *in*: Proceedings of Low-Permeability Reservoirs Symposium; Denver, Colorado, April 1991, Society of Petroleum Engineers, pp. 371–386.

property owners in the Cedar Hill and Bondad areas noticed bubbles in the Animas River and in their tap water. Water well pumps cavitated as natural gas exsolved from the groundwater so rapidly that some pumps failed to perform. Several pump houses exploded when methane gas accumulated in the confiied spaces and were ignited by a spark, possibly generated by a pressure switch or electric motor brushes. Gas seeps in soils that overlie Mesaverde sandstone outcrops were noted in the mid-1990s as manifesting patches of dead grass in pastures northeast of Durango along CR #240.[49] Some cathodic protection wells on *Amoco* Production Company CBM production locations in New Mexico flowed water to the surface either continuously or intermittently.[50] In August 1993, a resident of Pine River Ranches Subdivision south of Durango, Colorado notified the Colorado Oil and Gas Conservation Commission (COGCC) of gas contamination in his shallow (34-ft-deep) water well, and of his recent observation that streams of gas bubbles were rising through the water of the nearby Los Pinos (Pine) River. Significant concentrations of entrained methane were detected in samples of water from the well in question and from several other nearby domestic wells. This is in a topographically low area where the Los Pinos River has scoured a valley through the hogback at the northern rim of the San Juan Basin. Nine to thirty-five feet of alluvium overlie the Fruitland Formation subcrop in this valley. Four residences were situated over the Fruitland subcrop in the Pine River Ranches Subdivision. Explosive levels of methane were detected in the crawl spaces of two. The δC^{13} signature of isotopic methane collected from water wells in the Pine River Ranches Subdivision matched those of methane produced from the Fruitland Coal." In addition, soil gas samples in the area of the Pine River Ranches Subdivision were found to contain high levels of methane (up to 97%).[52] Initially, shrubs and bushes located in a well-defined strip parallel to the strike of the subcrop of specific coal seams began showing signs of stress, presumably due to oxygen depletion in the soils. Later, numerous large, mature Ponderosa Pine trees also showed signs of stress, and gradually died, many within a three-year period.[53]

The U.S. Geological Survey has conducted extensive geologic work pertaining to gas seepage in the San Juan Basin. Chafin, in 1994, made extensive analysis of gases in groundwater and soils.[54] *On* the basis of gas chemistry and the isotopic composition of methane recovered from these gases, gas collected from some domestic wells was similar to gas produced from the Fruitland Coal. Chafin concluded that the Fruitland Coal was the probable source of this gas.[55] In a 1997 report[56] concerning basin-edge seeps, USGS

---

[49] Bureau of Land Management, San Juan Field Office. 1999. A brief history and environmental observations, a working document. http://oil-gas.state.co.us/blm_sjb.htm.

[50] Personal observations, 1992–1993.

[51] Bureau of Land Management, San Juan Field Office. 1999. A brief history and environmental observations, a working document. http://oil-gas.state.co.us/blm_sjb.htm.

[52] Bennett, P., and Lee, R. 19%. Pine River Ranches, Colorado; soil gas investigation, final report. Prepared for the Colorado Oil and Gas Conservation Commission, Department of Geological Science, University of Texas at Austin.

[53] Bureau of Land Management, San Juan Field Office. 1999. A brief history and environmental observations, a working document. http://oil-gas.state.co.us/blm_sjb.htm.

[54] Chafin, D.T. 1994. Source and migration pathways of natural gas in near-surface ground water beneath the Animas River Valley, Colorado and New Mexico. USGS Water Resources Investigations Report 94-4006.

[55] Chafin, D.T. 1994. Source and migration pathways of natural gas in near-surface ground water beneath the Animas River Valley, Colorado and New Mexico. USGS Water Resources Investigations Report 94-4006.

surface disturbance will last for the life of a CBM development. In the proposed Wyodak development, about 61% of the surface disturbance will be of a short-term nature. When only long-term disturbance is considered, about 97% can be attributed to roads and pipelines.[61]

Noise

The production of CBM requires the operation of wellsite equipment. Although the noise generated by wellsite equipment is often a low hum, the humming can be an aggravation to those living nearby.[62] To take CBM to market, the gas must be compressed. Compressors are by far the noisiest aspect of CBM development. "Depending on wind direction, the roar of a field compressor can be heard three to four miles from the site. Near the compressor stations, people need to shout to make themselves heard over the sound of the engines."[63] Heavy vehicle traffic on access roads likewise produces noise, as well as dust.

Equipment noise can be mitigated though the installation of mufflers and, possibly, noise abatement structures. Additionally, the locations chosen for compressor stations can be selected to minimize their impact on the acoustic environment. Vehicle traffic is a more difficult problem. Reducing impacts on wildlife may require scheduling traffic so as to mitigate its impact on wildlife activities such as reproduction and feeding. Speed limits and road surface maintenance are important in mitigating dust.[64]

Air Pollution

Air pollution accompanies any oil and gas development. Concerns in the Powder River Basin are typical, but are heightened by the large number of wells that are projected to be drilled over a fairly short time. The use of internal combustion engines to drill and service wells, compress gas, and provide transportation will produce emissions of nitrogen oxides, carbon monoxide, sulfur dioxide, carbon dioxide, hydrocarbons, and particulate matter. These emissions will have a cumulative impact on air quality.[65] Stationary-source air pollution is also a concern. CBM processing requires an increase in processing plants to accommodate the volume of extracted methane.[66] Each of these processing plants will emit methane and carbon dioxide. Furthermore, traffic from the

---

[61] See Tables 2-1 and 2-2 *in* Bureau of Land Management, U.S. Department of the Interior. 1999. Wyodak Coal Bed Methane Project Final Environmental Impact Statement.

[62] Parker, F. Coalbed methane drilling – local impacts. La Veta Signature, 9/5/00.

[63] Powder River Basin Resource Council, picture caption, Coalbed Methane Monitor, Late Summer 2000, p. 7.

[64] See Wyoming Department of Game and Fish. Sage and Sharp-tailed Grouse Considerations with Coalbed Methane Development at hthx//cbmcc.vcn.com//and Wyoming Department of Game and Fish Wildlife Considerations for CBM Development at htW://cbmcc.vcn.com//.

[65] The DOI's Budget Request for the BLM for fiscal year (FY) 2001 states: "The BLM is also faced with critical air quality issues from the development and transportation associated with [CBM] and other energy development efforts in the [PRB] of Wyoming and Montana." *U.S. DOI, Budget Justifications and Annual Performance Plan* Fiscal *Year* 2001: *Bureau of* Land *Management* III-23 (Feb. 2000) [hereinafter *Budget Plan*]; *see also Methane Gas Traffic Crowds Roads, Casper Star Trib.*, July. 26, 1999, at A4 ("An abundance of gas is the main contributor to swelled traffic on Highway 50 and Highway 59 this spring. [CBM] gas.").

[66] Bureau of Land Management, U.S. Department of the Interior. 1999. Wyodak Coal Bed Methane Project Final Environmental Impact Statement.

CBM boom in Wyoming is crowding roads. Much of the traffic is from the transient labor force arriving from all over the country to help lay pipeline and drill wells. Because well construction requires 7 to 25 people at a time, the construction of new wells requires substantial manpower. The BLM has noted that the increase in workers in high-extraction areas has created a problem for air quality in the area.[67] Other air impacts discussed in the Wyodak Environmental Impact Statement (Wyodak EIS) include impaired visibility standards. Specifically, the Wyodak EIS projected additional days of significant visibility impairment (more than 5%) due to the Wyodak CBM development alone for three Class I airsheds (Northern Cheyenne Reservation, Badlands National Park, and Wind Cave National Park) and five Class II airsheds (Black Elk Wilderness, Jewel Cave National Monument, Mt. Rushmore National Monument, Cloud Peak Wilderness, and Devils Tower National Monument).[68]

Other Issues

The development of CBM resources *can* compete with other mineral resource development. For example, CBM development affects the mining of the same coal beds along the eastern margin of the Powder River Basin.[69] There are 18 surface coal mines along the eastern part of Campbell County and the northernmost part of Converse County.[70] In 1999, these coal mines produced about 300 million short tons from the Wyodak-Anderson coal zone--the same zone that is being explored and developed for CBM by about 80 gas operators basinwide. The produced coal from these mines made up about 30 percent of the total United States coal production in 2000, and it was shipped to more than 140 electric-power generating plants in the western, midwestern, southern, and southeastern United States, with minor amounts shipped overseas.

The major impact of CBM development on coal mining is groundwater withdrawal from the coal. Although this does not affect the amount of coal that is produced, it reduces the available water for mining operations. Additional conflicts between coal mine operators and CBM operators arise as a consequence of gas lost during mining. Because water is withdrawn from the coal during surface mining, reservoir pressures can be reduced. As a consequence, gas stored in the coal is released and escapes. This issue is currently being addressed.[71]

---

[67] Bureau of Land Management, U.S. Department of the Interior. 1999. Wyodak Coal Bed Methane Project Draft Environmental Impact Statement.

[68] Bureau of Land Management, U.S. Department of the Interior. 1999. Wyodak Coal Bed Methane Project Draft Environmental Impact Statement.

[69] Flores, R.M., et al. 2001. A field conference on impacts of coalbed methane development in the Powder River Basin, Wyoming. USGS Open File Report 01-126.

[70] Fort Union Coal Assessment Team. 1999. 1999 Resource assessment of selected Tertiary coal beds and zones in the northern Rocky Mountains and Great Plains region: U.S. Geological Survey Professional Paper 1625-A, Discs 1 and 2, version 1.1.

[71] Flores, R.M. et al. 2001. A field conference on impacts of coalbed methane development in the Powder River Basin, Wyoming. USGS Open File Report 01-126.

Gunnison Energy Corporation

March 20, 2003

DISTRICT COURT SAYS COUNTY RELIED ON ILLEGAL CONSIDERATIONS IN DENYING GUNNISON ENERGY'S FOUR GAS WELL PERMITS

DENVER, COLORADO – District Court Judge Lawrence A. Manzanares ruled Tuesday that the Delta County Board of Commissioners relied on illegal considerations in denying Gunnison Energy Corporation's application to drill four natural gas exploration wells.

Gunnison Energy Corporation ("GEC") had argued that the County's July 2002 denial of its development applications, which was based on concerns related to water quality and quantity, was pre-empted by state authority since those issues were within the sole jurisdiction of the Colorado Oil and Gas Conservation Commission ("COGCC").

The COGCC had already carefully reviewed GEC's detailed applications and issued permits for the four exploratory wells with conditions, including those designed to protect water and the environment.

After reviewing submitted briefs and hearing oral arguments from all of the parties, Judge Manzanares agreed with GEC that the County based its denial principally on issues related to potential water quantity and quality from the proposed well drilling. The Court also ruled that the County could not legally deny the applications or apply conditions of approval based on those considerations or others that are within the COGCC's jurisdiction.

"This decision in no way will alter our commitment to protect water resources," said Vince Zodiaco, President of GEC. "That is why we have hired some of the state's foremost experts to conduct the most extensive water study ever done of the area. The studies have confirmed our belief that these wells pose no risk to the County's water supply."

GEC, a sister company of Oxbow Mining, LLC and member of the Oxbow Group, hired Wright Water Engineers, and several credible experts formerly associated with the state and federal institutions to gather information on hundreds of existing water-wells in the proposed drilling area. The results of the study show 99 % of all the drinking water comes from surface run-off, water which is separate and distinct from any deep ground water that may be associated with natural gas deposits.

Judge Manzanares said from the bench that the County had acted improperly in denying GEC's application. As Judge Manzanares stated "the COGCC clearly regulates water quality and quantity issues both on-site and off-site." The Court ruled that, given the comprehensive COGCC regulations and the technical nature of environmental impacts, the County could not deny or condition GEC's application on these grounds.

The Court reserved for later determination the question as to whether the County's concerns regarding off-site utilities served as an adequate basis for denying the applications, particularly in light of GEC's claim that it did not disclose off-site utilities in its application because none are needed.

In response to the Court's suggestion that the parties quickly proceed to resolve the dispute, County Attorney Brad Kolman told the Court that the County would be inclined to reconsider the County's denial in light of the Court's pre-emption ruling.

The Court also found that GEC could pursue its claim against the County for violating its constitutional rights to due process and equal protection.

For more information contact:

Tony Gale
Vice President
Gunnison Energy Corporation
303-296-4222

GUNNISON COUNTY, COLORADO
TEMPORARY REGULATIONS FOR OIL AND GAS OPERATIONS

SECTION 1-101: PURPOSE.

A. GENERAL PURPOSE. The purpose of these *Regulations* is to establish temporary regulations that provide reasonable limitations and safeguards for the exploration and production of oil and gas resources in the County. The goal is to provide a framework for the responsible exploration and production of oil and gas resources in a manner that conserves other natural resources, that is compatible with surrounding land uses, and that mitigates adverse impacts to and protects the public health, safety, welfare and the environment of the County.

B. INTENT TO NOT DUPLICATE OTHER PERMIT PROCESSES OR REQUIREMENTS. The County intends to avoid duplicative permit processes or requirements. The County will review permit applications concurrently with other required state or federal agency permitting processes whenever possible.

C. RELATIONSHIP TO THE GUNNISON COUNTY LAND USE RESOLUTION. These *Regulations* are intended to be a stand-alone document and are not an amendment to or a Section of the *Gunnison County Land Use Resolution.*

SECTION 1-102: AUTHORITY.

These *Regulations* are authorized by, *inter alia*, Section 30-28-101, et seq.; Section 30-28-201, et seq.; and Section 29-20-101, et seq., C.R.S.

SECTION 1-103: APPLICABILITY.

A. ALL OIL AND GAS OPERATIONS SHALL COMPLY WITH THIS REGULATION. All Oil and Gas Operations in the unincorporated areas on public and private land within the County shall comply with these *Regulations.*

B. OIL AND GAS PERMIT REQUIRED. No person shall engage in, cause, allow or conduct any Oil and Gas Operations prior to obtaining an Oil and Gas Permit unless the Operations fall within the exemption in Section 1-103C.

C. **OIL AND GAS OPERATIONS EXEMPTED FROM SUBMITTAL AND REVIEW REQUIREMENTS.** The following Oil and Gas Operations are exempt from these *Regulations*:

1. **MAPPING ACTIVITIES.** Mapping activities that do not result in any surface disturbance.

2. **EXISTING OIL AND GAS OPERATIONS.** Operation and maintenance of well sites, wells and pipelines, that are legal nonconforming uses under Section 1-103 D. Any expansion of a nonconforming Oil and Gas Operation shall comply with Section 1-103 D.

3. **COAL MINE METHANE VENTING INTEGRAL AND ESSENTIAL TO EXISTING COAL MINING OPERATION.** Coal mine methane venting from a coal mine, existing as of January 8, 2001, that does not produce or distribute methane off-site, and that is an integral and essential component of the existing coal mine, shall not be subject to these *Regulations*.

D. **NONCONFORMITIES.** Within unincorporated Gunnison County, there are Oil and Gas Operations that were legally established before the effective date of these *Regulations* that do not conform to the legal requirements of these *Regulations*. The purpose of this Section is to regulate those nonconforming Operations.

1. **NON-ABATEMENT PROVISION.** Unless otherwise stated herein, it is the intent of this subsection that nonconforming Oil and Gas Operations that were legally established before the effective date of this *Regulation* be permitted to continue.

2. **CONTINUED OPERATION OF LEGALLY ESTABLISHED NONCONFORMING OIL AND GAS OPERATIONS SHALL BE ALLOWED.** Legally established non-conforming Oil and Gas Operations, including ordinary repairs and maintenance thereto, shall be allowed to continue, so long as they remain otherwise legal and comply with the requirements of these *Regulations*.

3. **LIMITED EXTENSION OR EXPANSION.** A legal nonconforming Oil or Gas Operation shall only be extended, expanded or altered in a manner that decreases or does not expand, the nonconforming use

a. **EXTENSION OR EXPANSION ONTO LAND OUTSIDE OF PERMITTED AREA.** Any extension or expansion of a legal nonconforming Oil or Gas Operation onto land outside of a specified area used prior to the adoption of these *Regulations* shall comply with the requirements of these *Regulations*.

4. **RELOCATION.** A legal nonconforming Oil or Gas Operation shall not be moved, in whole or in part, unless the relocation brings the Oil or Gas Operation into compliance with the requirements of this *Regulation*.

5. **ABANDONMENT OF NONCONFORMING OIL OR GAS OPERATION.** If any legal nonconforming Oil or Gas Operation is abandoned for a period of one year, renewal of that use or the use of that structure shall not be initiated until after a review by the Planning Department has determined that the renewed use will not pose a threat to public health, safety, welfare or the environment. For the purpose of this subsection, "abandonment" means the intent to not continue the legally established nonconforming Oil or Gas Operation, coupled with the discontinuance of the nonconforming Oil or Gas Operation. There is a presumption that there is an intent to abandon, if the well is not currently producing gas.

6. **DAMAGE OR DESTRUCTION.** A legal nonconforming Oil or Gas Operation that is demolished or destroyed by an act of God or through any manner not willfully accomplished by or for the owner may be restored within one year of the damage or destruction as of right, regardless of the extent of demolition or destruction, conditioned upon issuance of each required permit, pursuant to these *Regulations*. A one time, two-year extension of the initial year may be granted by the Planning Director upon findings that:

   a. **Hardship.** There would be a substantial hardship to the owner without the extension; and

   b. **Substantial effort to restore**. Within the first eight months after the destruction, the owner has substantially cleaned up and removed, if unusable, the damaged Operation.

E. **CLASSIFICATION OF IMPACT REVIEW FOR OIL AND GAS PERMIT.** Unless specifically exempt, Oil and Gas Operations shall

be classified and reviewed within one of the three following classes of Oil and Gas Permits:

1. **OIL AND GAS PERMIT FOR NO SIGNIFICANT IMPACT OIL AND GAS OPERATION.** An application for an Oil and Gas Permit for a No Significant Impact Oil and Gas Operation shall be reviewed administratively by the Planning Department under Section 1-106A. An Oil and Gas Operation shall be classified as a No Significant Impact Oil and Gas Operation if it consists solely of the following elements:

   a. The Oil and Gas Operation, without mitigation, in its proposed location is unlikely to have any significant adverse impact to the County taking into consideration the Oil and Gas Operation Standards in Section 1-107; and

   b. The Oil and Gas Operation will consist solely of the installation or construction by one Operator of no more than two (2) wells, within one mile of each other, during the same calendar year, and there is no other well(s) existing or proposed within one mile of either of the proposed well(s); or

   c. The Oil and Gas Operation will consist solely of the installation or construction by one Operator of no more than two (2) flowlines or gathering lines within one mile of each other during the same calendar year; or

   d. The Oil and Gas Operation will consist solely of the installation or construction by one Operator of storage yards and construction staging areas disturbing one acre or less, during the same calendar year; and

   e. The Oil and Gas Operation is necessary to protect public health, safety, welfare or the environment.

   For purposes of determining if an Oil and Gas Operation is a No Significant Impact Oil and Gas Operation, all proposed activities of the Operator within unincorporated Gunnison County shall be taken into consideration.

2. **OIL AND GAS PERMIT FOR A MINOR OIL AND GAS OPERATION.** Applications for a Minor Oil and Gas Operation shall be reviewed under Section 1-106B by the Planning

I

STATEMENT OF ISSUES ON APPEAL

The Colorado Oil & Gas Association ("COGA" or "the association") adopts and incorporates by reference the statement of the issues contained in the Answer Brief of Appellee Colorado Oil & Gas Conservation Commission ("COGCC" or "the commission").

II

STATEMENT OF THE CASE

COGA adopts and incorporates by reference the statement of the case contained in the Answer Brief of the COGCC.

III

SUMMARY OF ARGUMENT

COGA does not intend to argue the technicalities of the standing issue, except to note that it agrees with Judge Martinez that Appellants' complaint regarding COGCC Rule 303 does not (and cannot conceivably) involve an actual dispute, and, therefore, Appellants cannot show that they have "suffered injury in fact to a legally protected interest". *Wimberly v. Ettenberg*, 570 P.2d 535 (Colo. 1977).

The reason for this is that Appellants, along with *amici* Colorado Counties, Inc. and the Colorado Municipal League, misstate the import of COGCC Rule 303 and wrongly suggest that this matter involves global questions relating to the "balance of power" between state and local interests in regulating oil and gas. *Appellants' brief at 19.* This Honorable Court has recently had occasion to consider a case with wide-ranging

application to this issue.[1] Appellants reject the Court's opinion in *Town of Frederick* as "in error". *Appellants' brief at 20.* COGA, on the other hand, believes that this Court properly decided the issues in that case and provided valuable clarification regarding the relationship between state and local regulation of oil and gas. In any case, however, the matter at-hand is not a reconsideration of *Town of Frederick* and entails only a very narrow legal question which is easily resolved.

IV

ARGUMENT

COGCC Rule 303 states, in pertinent part, that the commission's "permit-to-drill shall be binding with respect to any conflicting local government permit or land use approval process." Contrary to the claims of Appellants and their *amici*, this proviso does not represent some global assertion of preemption by the COGCC. *It explicitly relates only to the drilling permit itself.* The issue therefore narrows to the question of what does the permit-to-drill entail and control.

Examination of this COGCC permit (Forms 2 & 2A, *see Exhibit 1*) reveals that it largely consists of general information about the operator and the proposed well. For example, Form 2 requires the operator's name and address; the location of the well; the target formation and applicable "spacing unit"; mineral ownership and applicable lease area; and, well construction details, such as hole size, depth and diameter of surface and production casing, cement coverage, and blow-out prevention equipment. Form 2A requires information relating to the current land use, soil types and plant community as a baseline for subsequent reclamation. Maps, diagrams and photographs are also required.

---

[1] *Town of Frederick v. North American Resources Company* (Weld County District Court No. 99CV1082; *Aff'd.* No. 01CA893; 1/13/03)

Surely, Appellants do not object to the requirement that operators supply information about proposed wells to the COGCC. Fundamentally then, there are three "operative" features of the drilling permit that, hypothetically, could give rise to a "conflict" with a local permit or land use process. But, it is clear from relevant case law that these areas are not within the purview of such local regulation, and the theoretical conflicts thereby fade away.

First, the COGCC permit-to-drill allows the operator to perform the activity itself. The right to drill is, in the first instance, an incident of the ownership of the mineral estate.[2] However, the COGCC has been authorized by statute to require a permit for the drilling of wells in order to prevent waste and protect the correlative rights of multiple owners of the resource. C.R.S. 34-60-102(1); 106(1)(f); 116(1). Local government denial of the right to drill a well for which the COGCC has issued a drilling permit would constitute the clearest possible example of an impermissible "operational conflict" – prohibiting that which the state has permitted.[3]

This Court, in its *Town of Frederick* opinion, noted that the Town's "ordinance provides that the board of trustees 'shall approve' an application" to drill a well and that "the ordinance does not allow the Town to prevent it entirely ...."[4] Thus, it is clear that no conflict could arise with respect to the state's grant of permission to drill a well because local governments may not supercede that authorization through a land use approval process that precludes such activity.[5]

---

[2] *Frankfort Oil Co. v. Abrams*, 413 P.2d 190 (Colo. 1966)
[3] *Board of County Commissioners, La Plata County v. Bowen/Edwards Associate,. Inc.*, 830 P.2d 1045, 1060 (Colo. 1992).
[4] *Supra* note 1; *Slip Opinion* at page 20.
[5] See also *Voss v. Lundvall Bros., Inc.* 830 P.2d 1061 (Colo. 1992)

Second, the COGCC drilling permit specifies the legal location for a well. Once again, this is an area reserved to state control, and no conflict with local regulation is possible. The centrality of well location to the COGCC's mission was recognized by the Colorado Supreme Court in *Bowen/Edwards*: "Oil and gas production is closely tied to well location, with the result that the need for uniform regulation extends also to the location and spacing of wells."[6] This Court affirmed a similar statement of law in Judge West's District Court opinion in *Town of Frederick*: "the practical effect" of the Town's setback regulation is "to require different well locations than those provided for by the COGCC. This creates an impermissible conflict with state law ... [and] ... attempts to regulate location, which is clearly an area the state has preempted."[7]

Third, the COGCC drilling permit regulates technical details relating to the construction of a well, including its depth, target formations, casing plan, cementing program, and type of blowout prevention equipment. No actual conflict with a local permit is possible in this arena either. Local governments have no expertise in such matters and generally concede that regulation of "below-ground" activities is exclusively the commission's domain. Moreover, *Bowen/Edwards* teaches that:

> There is no question that the efficient and equitable development and production of oil and gas resources within the state *requires uniform regulation of the technical aspects of drilling*, pumping, plugging , waste prevention, *safety precautions, and environmental restoration.*[8]

---

[6] *Supra* note 3 at 1058.
[7] 99CV1082, Weld County District Court at page 6.
[8] *Supra* note 3 at 1058, emphasis added.

Thus, with respect to each of the three substantive, operative aspects of the COGCC permit-to-drill, there can be no actual controversy regarding a conflicting local permit or land use approval process. Local governments are precluded from (1) denying the right to drill a well; (2) regulating the location of a well; or (3) regulating the technical aspects of drilling a well, including applicable safety precautions and reclamation requirements. Rather than misstating applicable case law, the COGCC Rule 303 proviso encapsulates it.

V

CONCLUSION

Appellants and their *amici* mischaracterize the limited scope of COGCC Rule 303 and exaggerate the issues in this case. They make the proverbial "mountain out of a molehill" and assert that disaster will result for local governments if Judge Martinez's dismissal below is not overturned. Similar dire warnings were sounded in the unsuccessful attempt to obtain Colorado Supreme Court review of this Court's decision in *Town of Frederick*. Local governments may believe that this Court was mistaken in its *Town of Frederick* opinion, but this case does not present anything like the wide-ranging issues at-stake therein and is not an appropriate vehicle for reconsidering that decision. Appellants cannot point to any realistic scenario whereby the COGCC permit-to-drill would not be controlling with respect to any of its operative functions, and, accordingly, Judge Martinez should be affirmed.

RESPECTFULLY SUBMITTED THIS 17TH DAY OF MARCH, 2003

COLORADO OIL & GAS ASSOCIATION

Kenneth A. Wonstolen #11090
COGA General Counsel
1776 Lincoln Street, Suite 1008
Denver, CO 80203
303-861-0362