Approved: May 1, 2002 Carl Dean Holmes
Date

MINUTES OF THE HOUSE COMMITTEE ON UTILITIES.

The meeting was called to order by Chairman Carl D. Holmes at 12:24 p.m. on March 29, 2002 in Room 526-S of the Capitol.

All members were present except: Representative Don Dahl
Representative Tricia Lightner
Representative Judy Morrison
Representative Don Myers

Committee staff present: Robert Chapman, Legislative Research
Dennis Hodgins, Legislative Research
Mary Torrence, Revisor of Statutes
Jo Cook, Administrative Assistant

Conferees appearing before the committee: Robert Krehbiel, Kansas Independent Oil & Gas Association
Dick Brewster, BP America
Mike LeMascus, Devon Energy
Jonathon Small, Exxon/Mobile
Diana Edmiston, Kansas Corporation Commission

Others attending: See Attached List

HB 3031 - Authorizing venting, flaring or other use of certain natural gas

Chairman Holmes opened the hearing on **HB 3031**.

Robert Krehbiel, Executive Vice President for the Kansas Independent Oil & Gas Association, testified in support of **HB 3031** (Attachment 1). Mr. Krehbiel explained that the State Conservation Commission does not have statutory authority to permit or authorize the venting or flaring of natural gas unless it was produced in connection with oil production. This bill was introduced to meet the needs of the new interest in coal bed methane production in Kansas. Additionally, Mr. Krehbiel provided language to amend the bill that allows the Corporation Commission broader authority. Mr. Krehbiel also distributed a copy of the Kansas Geological Survey Public Information Circular 19 "Natural Gas from Coal in Eastern Kansas" (Attachment 2).

Dick Brewster, Director of Government Affairs for BP America, addressed the committee in support on **HB 3031** (Attachment 3). Mr. Brewster stated that flaring or venting of gas is often necessary in the drilling and work over activities connected with gas production from conventional wells. He asked that the committee do what they can to allow the industry to continue to do all it can to increase gas production.

Mike LaMascus, Senior Operations Engineer for Devon Energy, spoke in support of **HB 3031** (Attachment 4). Mr. LaMascus stated Devon Energy has leased 300,000 acres in southeastern Kansas in hopes of developing a large amount of coalbed methane gas. Without the ability to vent or flare small quantities of natural gas during processing, producers cannot economically produce this much needed energy resource.

Jonathan Small, on behalf of Exxon/Mobile, appeared in support of **HB 3031**.

Written testimony in support of **HB 3031** (Attachment 5) was submitted by David Bleakley, Legislative Chairman of Eastern Kansas Oil and Gas Association.

Diana Edmiston, Senior Assistant General Counsel for the Kansas Corporation Commission, testified in support of **HB 3031** (Attachment 6). Ms. Edmiston told the committee the Commission occasionally received requests to vent or flare gas in situations not covered under current statute and this legislation would authorize the Commission to grant those requests.

The conferees responded to questions from the committee.

Chairman Holmes closed the hearing on **HB 3031** and opened debate on the bill.

MINUTES OF THE HOUSE COMMITTEE ON UTILITIES, Room 526-S Statehouse, at 12:24 p.m. on March 29, 2002.

Representative Kuether moved to amend the bill using proposed amendments from Robert Krehbiel (Attachment 1). Representative Toelkes seconded the motion. The motion carried. Representative Kuether moved to recommend **HB 3031**, as amended, favorable for passage. Representative Dreher seconded the motion. The motion carried. Representative Kuether will carry the bill.

Chairman Holmes announced he intended to have the committee meet at first recess on Tuesday.

The meeting adjourned at 12:46 p.m.

The next meeting will be April 2, 2002.

HOUSE UTILITIES COMMITTEE GUEST LIST

DATE: March 29, 2002

NAME	REPRESENTING
Jim Allen	EKOGA
J.C. Long	AQUILA INC.
Joe Dick	KCBPU
Robert Krehbiel	KIOGA
Mike LaMascus	Devon Energy Corp.
Dylan Waddle	Devon Energy Corp.
Bruce Graham	KEPCo
Ron Gaches	GBBA
Jack Glaves	Duke-PTI + K-M
Diane Edmiston	KCC
Ken Peterson	KPC
Dick Brewster	BP
Steve Johnson	Kansas Gas Service
Leslie Kaufman	KFB
J.P. Small	EXXON Mobil
Amy Campbell	Midwest Energy, Inc.

STATE OF KANSAS
HOUSE OF REPRESENTATIVES
COMMITTEE ON UTILITIES

HEARING ON HOUSE BILL 3031
MARCH 29, 2002

TESTIMONY OF
ROBERT E. KREHBIEL, EXEC. V.P.
KANSAS INDEPENDENT OIL & GAS ASSOCIATION

HOUSE UTILITIES
DATE: 3-29-02
ATTACHMENT 1

CHAIRMAN HOLMES AND MEMBERS OF THE COMMITTEE:

My name is Robert E. Krehbiel and I am appearing on behalf of the Kansas Independent Oil & Gas Association in support of HB 3031. The Kansas Independent Oil & Gas Association was organized 65 years ago and consists of independent producers who explore for and produce oil and natural gas.

Last week, at the Oil and Gas Advisory Committee Meeting at the State Conservation Commission in Wichita, it was brought to our attention that the Commission did not have statutory authority to permit or authorize the venting or flaring of natural gas unless it was natural gas produced in connection with the production of oil. This realization resulted from the review of Kansas Statutes by counsel for the KCC upon application of a producer for authority to vent natural gas during the dewatering and testing phase of this producer's coal bed exploration and production efforts in Southeast Kansas.

Since gas from coal seams is not produced in connection with the production of oil, counsel for the KCC determined that the Commission did not have the statutory authority necessary to authorize the venting or flaring of gas produced with water. Venting of gas during the dewatering and testing phase is a necessary procedure to determine the economic viability of coal bed wells. Until a well is dewatered and tested it can not be determined whether the additional costs of building processing facilities and laying pipelines to market the gas can be economically justified. Since a good number of these wells have already been drilled and await dewatering and testing an immediate need exists. We therefore, very much appreciate the willingness of this Committee to hear this bill late in the session.

The production of gas from coal seams is relatively new to the State of Kansas. For the Committee's information I have handed out a recent publication entitled *Natural Gas from Coal in Eastern Kansas* authored and published by the Kansas Geological Survey. This provides a brief overview of the potential which this resource holds for Kansas. Figure 2 of this brochure describes the dewatering stage of this process where the primary need for venting of natural gas exists. An engineer, experienced in this process is here today to testify and will be able to respond to any questions you might have.

Attached to my testimony is a copy of KSA 55-102, the current Statute relative to flaring gas. All references in this statute are to gas produced in connection with the production of oil. Also attached is a copy of the KCC Regulations regarding the venting or flaring of gas found at KAR 82-3-208 and 209. These Regulations refer only to casinghead gas which is gas produced in connection with the production of oil. There simply does not appear to be any regulation, or statutory authority which would permit a regulation, to allow venting or flaring of natural gas other than in connection with the production of oil. To our knowledge, Kansas is the only producing state with such a limitation.

House Bill 3031 was introduced to meet the needs of the new interest in coal bed methane production in Kansas and the bill was specifically drafted for that purpose. The Bill will simply allow the KCC to authorize the venting or flaring of natural gas produced from coal seams and associated shales by order, rule or regulation. The Commissions purpose is to prevent waste, including economic waste, and any orders, rules or regulations will be developed accordingly.

Subsequent discussions with industry have also indicated other situations where venting or flaring is necessary to prevent economic waste. Some gas wells require significant testing to establish the engineering data necessary to determine reserves. Until this is done the investment in facilities and pipelines necessary to market gas may result in economic waste. Another situation where venting is economically prudent is in the blowing of gas wells to remove any build up of water. Occasional blowing will often eliminate the need to install costly pumping units to remove water or the costs of pulling units to occasionally swab water from the well bore.

To cover these situations as well as the needs of coal bed production we are asking that the language in the bill be altered to allow the KCC broader authority. That proposed language is attached to my testimony. This proposed language would simply grant the KCC authority to authorize venting or flaring of gas produced from gas wells or gas produced in connection with the production or oil, or coalbed natural gas produced from coal seams or associated shale.

Thank you very much for your timely consideration of this important bill.

55-102

Chapter 55.--OIL AND GAS
Article 1.--OIL AND GAS WELLS;REGULATORY PROVISIONS

55-102. Control and management of oil and gas wells; unlawful acts, penalty; flaring of gas permitted, when. (a) Except as provided in subsection (b), it shall be unlawful for any person, firm or corporation having possession or control of any natural-gas or oil well, whether as a contractor, owner, lessee, agent or manager, to use or permit the use of gas by direct well pressure for pumping of oil or for blowing oil out of wells, or for operating any machinery by direct well pressure of gas, or to allow or permit the flow of gas or oil from any such well to escape into the open air without being confined within such well or proper pipes or other safe receptacle for a longer period than two days after gas or oil shall have been struck in such well, except that a reasonable time, not exceeding five days, shall be allowed such contractor, owner, lessee, agent or manager, in addition to such two days, in which to place in the well the casing, tubing, packers and other appliances necessary to properly operate the same and obtain the products therefrom or , in case such contractor, owner, lessee, agent or manager shall not desire to operate such well, to securely enclose the same, so as to prevent the escape of oil or gas therefrom, and thereafter all such gas or oil shall be safely and securely confined in such well, pipes, or other proper receptacle. The provisions of this section shall not be construed to apply to the escape of gas or oil during continuous drilling. Any person violating any of the provisions of this section shall be deemed guilty of a misdemeanor, and shall be fined in the sum not less than $50 nor more than $200, or by imprisonment in the county jail for not less than 30 days nor more than six months, and each day that the violation continues shall constitute a separate offense.

(b) Natural gas produced in connection with the production of oil may be flared or used in any manner if such use or flaring is authorized by an order, rule or regulation of the state corporation commission.

History: L. 1901, ch. 224, § 1; R.S. 1923, 55-102; L. 1983, ch. 183, § 1; July 1.

is applicable, from any lease or unit boundary line shall have its attributable acreage determined by the establishment of an acreage-attribution unit. The width of the acreage-attribution unit shall be twice the distance from the well to the nearest lease or unit boundary line. The length of the unit shall be the same as the width.

(c) Acreage attributable. When the acreage attributable to any well is less than 10 acres, the well's allowable shall be reduced in the same proportion that the acreage attributable to the well bears to 10 acres.

(Authorized by and implementing K.S.A. 55-604; effective T-83-44, Dec. 8, 1982; effective May 1, 1983; amended May 1, 1984; amended May 1, 1986; amended May 1, 1988.)

82-3-208. VENTING OR FLARING OF GAS.

(a) The commission may, without hearing, permit venting or flaring of casing-head gas, other than sour casing-head gas. The operator shall file an affidavit with the conservation division. The affidavit shall state:

(1) The well has 25 mcfd or less of casing-head gas available for sale as established by a state-supervised test; and

(2) The casing-head gas volume is uneconomic to market because a pipeline connection is not feasible, or the price received would not allow reasonable recovery of the investment required to market such gas and the direct expense attributable thereto.

(b) The affidavit shall also include the following statement: "The operator has made a diligent effort to obtain a market for the gas and the volume of casing-head gas produced from this well will not economically justify a pipeline connection."

(c) If the total volume produced and available for sale from a well is in excess of 25 Mcfd, the venting or flaring of a specified amount of casing-head gas may be permitted by the commission upon application and after notice and hearing. In making such a determination, the following shall be considered by the commission:

(1) the availability of a market or of pipeline facilities;

(2) probable recoverable gas reserves;

(3) the necessity for maintenance of gas pressure in the formation to protect the nonwasteful production of oil;

(4) the feasibility of reinjection of such gas;

(5) a reasonable testing period;

(6) any anticipated change in the gas/oil ratio;

(7) the applicant's compliance with the department's air quality regulations in K.A.R. 28-19-6 *et seq.*; and

(8) any other fact or circumstance having bearing on the reasonableness of the request.

(d) Any interested party may file an application to vent or flare a total volume of casing-head gas in excess of 25 mcfd from a well. An original and four copies of the application shall be filed with the conservation division. The application shall be set for hearing by the commission. The applicant shall publish notice of the hearing pursuant to K.A.R. 82-3-135.

(e) The application shall include the following:

(1) The name and address of each operator or lessee of record within a one-half mile radius of the subject well, and a certificate of mailing indicating the date service of a copy of the application was made to each;

(2) the name and address of each owner of record of the minerals in unleased acreage within a one-half mile radius of the subject well, and a certificate of mailing indicating the date service of a copy of the application was made to each; and

(3) the name and address, as shown by the applicant's books and records, of each person owning the royalty or leasehold interest in the acreage upon which the well is located, and a certificate of mailing indicating the date service of a copy of the application was made to each.

(f) When required by the commission, all casing-head gas vented or flared under this rule shall be metered and the charts or records retained for a period of two years. Such information shall be reported to the commission semiannually or as designated by the commission. Continuing jurisdiction with authority to terminate the venting or flaring of casing-head gas when necessary shall lie with the commission.

(Authorized by K.S.A. 1989 Supp. 55-604, K.S.A. 55-704; and implementing K.S.A. 55-102, K.S.A. 1989 Supp. 55-604, K.S.A. 55-702, 55-704, K.S.A. 1989 Supp. 55-605; effective May 1, 1984; amended May 1, 1986; amended April 23, 1990.)

82-3-209. FLARING OF SOUR GAS.

(a) The flaring of sour casing-head gas may be permitted by the commission. In making such a determination, the following factors shall be considered by the commission:

(1) the availability of a market or of pipeline facilities;

(2) probable recoverable gas reserves;

(3) the necessity for maintenance of gas pressure in the formation to protect the nonwasteful production of oil;

(4) the feasibility of reinjection of sour gas;

(5) any anticipated change in the gas/oil ratio;

(6) the hydrogen sulfide content of the gas;

(7) the feasibility of desulfurization of the gas;

(8) the proposed flaring facility;

(9) the applicant's compliance with the department's air quality regulations in K.A.R. 28-19-6 *et seq.*; and

(10) any other fact or circumstance having bearing on the reasonableness of the request.

(b) Any interested party may file an application for the flaring of sour casing-head gas from a well. An original and four copies of the application shall be filed with the conservation division. The application shall be set for hearing by the commission. The applicant shall publish notice of the hearing pursuant to K.A.R. 82-3-135.

(c) The application shall include the following:

1-10

Session of 2002

HOUSE BILL No. 3031

By Committee on Taxation

3-22

AN ACT concerning natural gas; amending K.S.A. 55-102 and repealing the existing section.

Be it enacted by the Legislature of the State of Kansas:

Section 1. K.S.A. 55-102 is hereby amended to read as follows: 55-102. (a) Except as provided in subsection (b), it shall be unlawful for any person, firm or corporation having possession or control of any natural-gas ~~or~~ well, oil well, or coal bed natural gas well, whether as a contractor, owner, lessee, agent or manager, to use or permit the use of gas by direct well pressure for pumping of oil or for blowing oil out of wells, or for operating any machinery by direct well pressure of gas, or to allow or permit the flow of gas or oil from any such well to escape into the open air without being confined within such well or proper pipes or other safe receptacle for a longer period than two days after gas or oil shall have been struck in such well, except that a reasonable time, not exceeding five days, shall be allowed such contractor, owner, lessee, agent or manager, in addition to such two days, in which to place in the well the casing, tubing, packers and other appliances necessary to properly operate the same and obtain the products therefrom or , in case such contractor, owner, lessee, agent or manager shall not desire to operate such well, to securely enclose the same, so as to prevent the escape of oil or gas therefrom, and thereafter all such gas or oil shall be safely and securely confined in such well, pipes, or other proper receptacle. The provisions of this section shall not be construed to apply to the escape of gas or oil during continuous drilling. Any person violating any of the provisions of this section shall be deemed guilty of a misdemeanor, and shall be fined in the sum not less than $50 nor more than $200, or by imprisonment in the county jail for not less than 30 days nor more than six months, and each day that the violation continues shall constitute a separate offense.

(b) Natural gas produced from gas wells or gas produced in connection with the production of oil, *or coalbed natural gas produced* ~~*in connection with the de-watering of*~~ *coal seams or associated shale,* may be flared, *vented* or used in any manner if such use ~~or~~, flaring *or venting* is authorized by an order, rule or regulation of the state corporation commission.

Sec. 2. K.S.A. 55-102 is hereby repealed.

1-7

Kansas Geological Survey
Public Information Circular 19
December 2001

Natural Gas from Coal in Eastern Kansas

Robert S. Sawin
Public Outreach, Kansas Geological Survey

Lawrence L. Brady
Geologic Investigations, Kansas Geological Survey

Coalbed methane now accounts for about 7 percent of the total annual gas production in the United States

Introduction

Methane, the main component of natural gas, has been a product of the petroleum industry for years. Many of us use natural gas in our homes—in our furnaces, water heaters, and stoves. Now, a relatively new and unconventional source of natural gas—methane from coal beds—has generated interest in eastern Kansas.

Coalbed methane is natural gas that occurs in coal beds. The geological process that turns plant material into coal generates methane gas. This gas was a deadly nuisance that produced explosions in underground coal mines, so the mines had to be ventilated to remove the gas. In the early 1980's, the mining industry began to capture and sell this gas rather than release it to the atmosphere. Thus, a new industry was created—the commercial production of methane from subsurface coal beds.

Coalbed methane now accounts for about 7 percent of the total annual gas production in the United States. In areas of the San Juan basin in New Mexico and Colorado, parts of the Black Warrior basin in Alabama, and basins in the central Appalachians, large quantities of methane are being developed from coal beds. This gas is now being exploited in other areas of thick, coal-bearing rocks such as the Powder River basin in Wyoming and Montana.

In Kansas, most of the activity has been in the southeastern part of the state, primarily Montgomery, Wilson, western Labette, and eastern Chautauqua counties; however, other parts of eastern Kansas that are underlain by coal beds also have potential for coalbed methane production (fig. 1). Coal beds that have potential to produce methane occur in eastern Kansas east of the Nemaha uplift, a subsurface geologic structure that runs from Oklahoma City, Oklahoma, north through El Dorado, Kansas, and just east of Manhattan, Kansas.

This circular describes coal and coalbed methane, gas production from coal, leasing and landowner mineral rights, and the potential for coalbed methane production in Kansas.

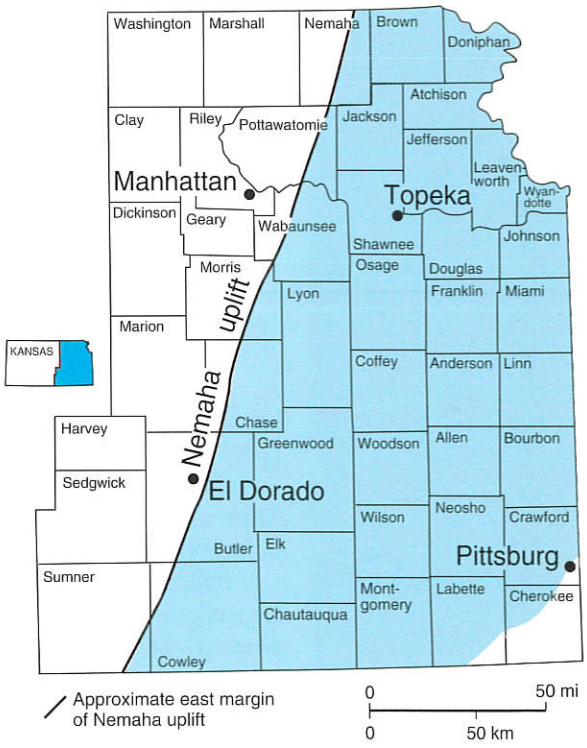

Figure 1—*Portion of Kansas with potential for coalbed methane development.*

Coal and Coal Gas

Coal is the most abundant energy source in the world. Coal deposits have been mined in Kansas for nearly 150 years, mostly in southeastern Kansas, where surface and subsurface mines have produced over 300 million tons of coal. Bituminous (soft grade) coal resources of Pennsylvanian age, deposited about 300 million years ago, are widespread in eastern Kansas and constitute nearly all the coal resources in the state. Coal production in Kansas peaked during World Wars I and II. Today, however, only one small mine operates in Kansas, near Prescott, in Linn County.

An increasing level of interest in coalbed methane has spurred activity in eastern Kansas

Coal forms from plant material that was accumulated in ancient swamps and bogs at rates fast enough to prevent decay. Upon burial, the material is first converted to peat. Through time, as temperature and pressure increase with further burial, peat is converted to coal (it takes about 10 feet of peat to make 1 foot of coal). During this process, large quantities of methane-rich gas are generated and stored within the coal. Coal can store surprisingly large volumes of gas, up to six or seven times as much gas as a conventional gas reservoir (typically sandstone or limestone) of equal rock volume. The amount of gas in coal depends on the degree of alteration the coal has undergone in the burial process, the depth below the surface, and the pressure of the reservoir.

Coalbed gas is mainly composed of methane (CH_4), the principal constituent of natural gas. Coalbed methane is what geologists call a sweet gas because it typically contains very few impurities such as hydrogen sulfide, nitrogen, or carbon dioxide, all normally found in natural gas. Coalbed methane, when burned, generates as much heat as petroleum-based natural gas.

Producing Gas from Coal

Coal contains gas and large amounts of water. Once the confining pressure on the coal is relieved (for example, by drilling and pumping), the gas is slowly released from the coal. Naturally occurring fractures, called cleats, provide the plumbing system within the coal that allows water and gas to travel through the coal to the well. For gas to be released from the coal, the pressure must be reduced by removing water from the coalbed, a process called dewatering. Dewatering brings large quantities of water (usually saltwater in Kansas) to the surface, which is reinjected deep underground.

Initial development of coalbed methane wells can take several months because of the large quantities of water that need to be pumped from the coal bed. In general, coalbed methane wells go through three stages during their production history (fig. 2). During the dewatering stage, water production initially exceeds that of methane, but as production continues, the volume of water decreases as the volume of methane increases. A stable production stage is reached when methane production reaches its maximum and water production levels off. During the decline stage, water production remains low and the amount of methane declines until methane becomes uneconomical to produce.

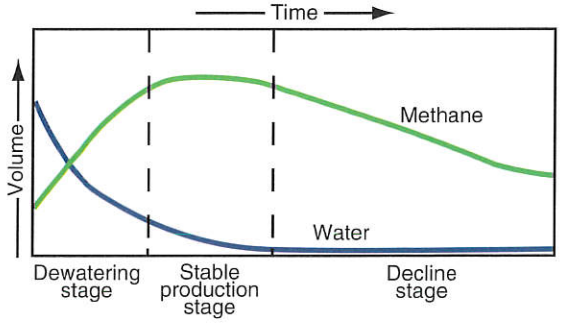

Figure 2—*Production stages of a coalbed methane well (adapted from Rice, 1997).*

Mineral Rights and Leases

An increasing level of interest in coalbed methane has spurred activity in eastern Kansas. Local landowners may benefit economically if they own the mineral rights beneath their property. Mineral rights are defined as the right of ownership of the mineral resources that underlie a tract of land.

Both the land surface and the resources below the surface can be owned and are considered property. The mineral rights can be owned in total or can be owned by the specific mineral commodity; for example, one company can own the mineral rights to the coal, while another company owns the oil and gas rights. Coalbed methane is natural gas and is considered part of the oil and gas minerals.

The owner of the mineral rights can be different than the surface owner. In Kansas, the landowner usually owns the subsurface rights, but sometimes these rights have been severed, or separated from the surface ownership. Severance of mineral rights occurs when the owner of both the surface and mineral rights sells or grants by deed the mineral rights underlying their property. The landowner may also reserve, or retain, all or a portion of the mineral rights upon sale of the property. Mineral deeds and mineral reservations are recorded with the county register of deeds and are included in any abstract of title to the land involved.

Mineral owners have the right to access and develop their minerals. Landowner rights are preserved, whether or not they participate in development of the mineral rights. Regulations are in place to stop operators if their activities are irresponsible or damaging to the surface. Landowners are entitled to compensation for loss of use or damage to their land. Most operators are willing to work with the landowner to reach a fair settlement for damages, but if this fails, state and federal regulations protect the landowner.

Before companies can begin an exploration and development program, they must obtain a lease to the mineral rights (in the case of coalbed methane, an oil and gas lease). An oil and gas lease is a legal agreement between the mineral-rights owner (the lessor) and the oil and gas operator (the lessee) that grants the operator the right to explore and develop the oil and gas resources which may underlie the area described in the lease. Some general stipulations that are usually part of a lease agreement are lisited below:

- A legal description of the area and the number of acres.
- The primary term of the lease. This can be for any period of time, but is usually five or ten years.
- A provision for lease rental payments (usually annual) by the operator to the mineral-rights owner. Rental payments maintain the lease in effect throughout the primary term. If oil or gas is found, the lease will remain in effect as long as production continues, even beyond the primary term of the lease.
- A royalty clause that stipulates the mineral-rights owner's share of the oil or gas production. The royalty may be any amount mutually agreed to by the operator and the mineral rights owner, but is usually one-eighth (12.5 percent) of the oil or gas produced from the lease. Usually the operator sells the oil or gas to a refiner and the mineral-rights owners receive payment for their share from the operator.

The bituminous coals of eastern Kansas have great potential for large quantities of methane

Coalbed Methane Potential in Kansas

The bituminous coals of eastern Kansas have great potential for large quantities of methane. In areas where the coals are deeper than 500 feet, and the gas has been trapped in the coals by thick overlying shales, economic quantities of methane gas may exist. Many other factors, such as the market price for natural gas, also determine the economic feasibility of exploring for coalbed methane in eastern Kansas.

Although the coal beds in eastern Kansas tend to be widely distributed, and several beds (up to 14) could be encountered in a well, the primary concern is the thinness of most of the coal beds and the correspondingly smaller volumes of gas. Evaluation of approximately 600 geophysical logs in eastern Kansas indicates that about 96 percent of the coal occurs in beds 14 to 42 inches thick (fig. 3) and only about 4 percent occurs in beds greater than 42 inches. The main strategy for exploring for coalbed methane in eastern Kansas will be to locate thicker coals or multiple coal beds to warrant viable economic development (fig. 4).

Most of the coals in eastern Kansas are less than 2,500 feet deep, so drilling costs should be relatively low. Many gas pipeline networks already exist, and Kansas has recognized disposal zones for the water that is produced with the methane. All these factors suggest that eastern Kansas is an important area for potential development of coalbed methane.

Photo: Robert S. Sawin

Figure 3—*Outcrop of a thin coal bed in Cherokee County.*

Agencies to Contact About Coalbed Methane

Kansas Corporation Commission
Conservation Division
Finney State Office Building
130 S. Market, Room 2078
Wichita, KS 67202-3802
316-337-6200
www.kcc.state.ks.us

Kansas Geological Survey
1930 Constant Ave.
Lawrence, KS 66047-3726
785-864-3965
www.kgs.ku.edu

Sources

Baars, D. L., Watney, W. L., Steeples, D. W., and Brostuen, E. A., 1989 (revised 1993), Petroleum—A primer for Kansas: Kansas Geological Survey, Educational Series 7, 40 p.

Brady, L. L., 1997, Kansas coal resources and their potential for coalbed methane; *in*, Transactions of the 1997 American Association of Petroleum Geologists Mid-continent Meeting, September 14–16, G. McMahan, ed. and compl.: Oklahoma City, Oklahoma, American Association of Petroleum Geologists, p. 150–163.

Clough, J. G., 2001, Coalbed methane—Potential energy source for rural Alaska: Alaska Geological Survey, Alaska GeoSurvey News, 5, no. 2, 3 p.

De Bruin, R. H., Lyman, R. M., Jones, R. W., and Cook, L. W., 2001, Coalbed methane in Wyoming: Wyoming State Geological Survey, Information Pamphlet 7 (revised), 19 p.

Nuccio, V., 2000, Coal-bed methane—Potential and concerns: U.S. Geological Survey, Fact Sheet FS-123-00, 2 p.

Rice, D., 1997, Coalbed methane—An untapped energy resource and an environmental concern: U.S. Geological Survey, Fact Sheet FS-019-97, http://energy.usgs.gov/factsheets/Coalbed/coalmeth.html (July 16, 2001).

U.S. Department of Energy, 2000, U.S. crude oil, natural gas, and natural gas liquids reserves, 1999 Annual Report: Energy Information Administration, U.S. Department of Energy, DOE/EIA-0216(99), 156 p.

Photo: Robert S. Sawin

Figure 4—*Coalbed methane well in Montgomery County, Kansas.*

The mission of the Kansas Geological Survey, operated by the University of Kansas in connection with its research and service program, is to conduct geological studies and research and to collect, correlate, preserve, and disseminate information leading to a better understanding of the geology of Kansas, with special emphasis on natural resources of economic value, water quality and quantity, and geologic hazards.

The Geology Extension program furthers the mission of the KGS by developing materials, projects, and services that communicate information about the geology of Kansas, the state's earth resources, and the products of the Kansas Geological Survey to the people of the state.

Public Information Circular 19
December 2001

Kansas Geological Survey
Geology Extension
The University of Kansas
1930 Constant Avenue
Lawrence, Kansas
66047–3726
(785) 864–3965
http://www.kgs.ku.edu

Printed on recycled paper with soy ink by The University of Kansas Printing Services

24

Comments to:

The Kansas House Committee on Utilities

Regarding:

House Bill No. 3031

Submitted By:

Dick Brewster
Director, Government Affairs
BP America

March 29, 2002

HOUSE UTILITIES
DATE: 3-29-02
ATTACHMENT 3

Mr. Chairman, Members of the Committee, for the record, my name is Dick Brewster, and I am Director of Government Affairs for BP.

I appreciate the chance to offer you our thoughts on H. B. 3031. We support passage of this legislation. However, an amendment is needed to allow venting or flaring natural gas from conventional wells, in addition to the coal bed methane wells now included in the legislation.

I won't go into detail about gas flaring in connection to coal bed methane production. While we have significant experience in the development of coal bed gas, it has not been in Kansas, and you will hear from others who are involved in Kansas production of gas from coal seams.

However, the flaring and/or venting of gas is often necessary in the drilling and work over activities connected to gas production from conventional wells. With that in mind, I urge you to amend House Bill No. 3031 to permit the regulated venting and/or flaring of gas from all gas production.

Once a conventional well is completed, it is necessary to vent the gas for a test of the well's producing capacity. And if a well is fractured, recompleted, cleaned, or otherwise worked over, it must be vented for a short period of time to re-establish production.

As far as I can tell, virtually every state in which gas production exists, allows venting or flaring under regulatory agency supervision and approval. If we are not allowed to vent or flare, many wells could not be recompleted, fractured or worked over. These wells would lose production. Significant gas will go unproduced, costing mineral owners, producers and the state, all of whom share in revenues generated by gas production.

The amount of gas flared or vented is not an environmental threat. Amounts are small and not significant. Gas which contains H2S, or Hydrogen Sulfide, would be flared, to protect the community from this component. Otherwise, gas would be vented.

While it might seem, at fist blush, wasteful to vent or flare the gas, it is not. Once again, these activities take place and are necessary to begin and/or

increase production. As I said, without being able to vent or flare, well life will be shortened, and ultimately, less gas will be produced.

We, are often able to contain gas which otherwise might be vented in some of the activities I described. And I expect that effort to continue and improve. But it is not always possible, and many operators do not have the capacity or capability to contain the gas.

I do not know if the current statute would apply to venting or flaring gas at a processing plant. But there are times when it is absolutely necessary. A plan shut down, whether for maintenance or by an accident, requires pressure to be taken off, and the gas must be flared.

Natural gas production, while declining, remains alive and well in Kansas. We hope you will permit it to continue by amending and passing this bill, and allowing the industry to continue to do all it can to increase production through some of the techniques I have described: some of which simply require small quantities of gas to be released.

In any event, Mr. Chairman, members of the committee, we urge you to amend House Bill No. 3031 to grant the Corporation Commission the authority to permit flaring and/or venting of gas from all sources of production under appropriate circumstances.

Again, I appreciate the chance to confer with you on this issue and will be glad to answer any questions.

Respectfully Submitted,

Dick Brewster

devon

Kansas House of Representatives
Utilities Committee
House Bill No. 3031
Testimony of Mike LaMascus, Senior Operations Engineer
March 29, 2002

My name is Mike LaMascus. I am a Senior Operations Engineer for Devon Energy Corporation. I have a Bachelor of Science degree in Petroleum Engineering from Tulsa University and worked for Phillips Petroleum Company and Helmerich & Payne before joining Devon in 2001. Devon is one of the top five US-based independent oil and gas producers and is the leader in coalbed methane production.

Devon recently leased 300,000 acres in southeastern Kansas with the hopes of developing a large amount of coalbed methane gas. To date, Devon has drilled 128 wells and hopes to drill approximately 100 more before the end of the year. We have built almost forty miles of pipeline and anticipate building more. Devon recently opened a production office in Chanute, KS. In addition to those people Devon employs directly, Devon employs hundreds of contractors, many of whom work on our behalf daily.

Coalbed methane gas is natural gas that is produced during the conversion of plant material to coal. Until recently, it was not economic to produce coalbed methane gas. Methane gas was considered a useless by-product and was vented to the atmosphere by coal companies during the mining process. Now, however, natural gas producers are developing this resource.

I'm here today to testify about the need to vent or flare coalbed gas during the dewatering and testing phases of coalbed methane production. Coalbed methane reservoirs are different from traditional gas reservoirs. The methane gas in coalbeds is held inside the coal by water pressure. It is necessary to release the water pressure in order to produce the gas. This means that at the beginning stage of development (the "dewatering" stage) the well produces water and a small amount of methane gas. If there is no available pipeline, then this small amount of gas may need to be vented or flared. Over time the amount of water decreases and, hopefully, the amount of gas increases.

I say hopefully, because no one is ever sure, initially, how much gas a well will produce. In order to more definitively assess how much gas can be expected, a well must be tested. During the testing of any gas well, whether conventional or coalbed, some gas must be vented or flared.

Additionally, producers must have the ability to perform "pilot tests". A pilot test is used to determine whether gas production rates are sufficient to justify building a gas gathering system. A typical pilot test consists of four producing coalbed methane wells and a water disposal well. The wells are allowed to flow and the amount of gas is measured. Because there is no pipeline yet, the test gas must be vented or flared. If the amount of gas is sufficient, then a pipeline is built. Without the results of a pilot test, building a pipeline is too risky for most operators, which leaves the gas "stranded".

In sum, without the ability to vent or flare small quantities of natural gas during the dewatering and testing stages, producers cannot economically produce this much needed energy resource. Devon respectfully requests that this committee favorably consider the proposed bill, which would allow producers to vent or flare coalbed natural gas under the supervision and guidance of the KCC.

HOUSE UTILITIES
DATE: 3-29-02
ATTACHMENT 4

HOUSE UTILITY COMMITTEE
March 29, 2002
RE: HB 3031 - An Act concerning Natural Gas; amending K. S. A. 55-102 and repealing the existing section.

Testimony of David Bleakley - Legislative Chairman
Eastern Kansas Oil and Gas Association
&
Director of Acquisitions & Land Management
Colt Energy, Inc.

The Eastern Kansas Oil and Gas Association (EKOGA) supports an amendment to K.S.A. 55-102 thru HB 3031, but would like to see the amendment in this Bill changed to include all natural gas.

Our association represents and supports eastern Kansas oil and gas producers, service companies, royalty owners and associated businesses along with the overall welfare of the Kansas oil and gas industry in this state.

In testimony supporting an amendment to K.S.A. 55-102 thru HB 3031, EKOGA feels the following outlines' the reason for an amendment.

1. **Currently K.S.A. 55-102** allows for; Natural gas produced in connection with the production of oil may be flared or used in any manner if such use or flaring is authorized by an order, rule or regulation of the state corporation commission.

2. **Amendment to K.S.A. 55-102** should allow for; Natural gas to be flared, vented or used in any manner if such use, flaring or venting is authorized by and order, rule or regulation of the state corporation commission.

3. **Reasoning for Amendment**; The Oil and Gas Industry needs to be able to flare, vent or use in any manner Natural gas if such use in authorized by and order, rule or regulation of the state corporation commission.

    A. By approving the amendment to allow all Natural gas instead of only natural gas produced in connection with the production of oil, this would give the authority and flexibility to the state corporation commission to authorize the flaring, venting or use in any manner Natural gas that the commission does not have the ability to address today.

    B. Not only does the state corporation commission need the authority to address the situational problems oil and gas operators encounter when they want to flare, vent or use in any manner natural

gas from conventional natural gas wells, but Coalbed Natural Gas wells need to be vented during the testing and dewatering period to see if they are going to be commercially productive or not. Normally the amount of gas produced from a newly drilled Coalbed Natural Gas well is very minimal or none at all, until enough water has been pumped from the well to allow the gas trapped in the coal to be released. Once this process has been completed, then the determination of whether a well is commercially productive or not can be made.

C. The ability to flare, vent or use in any manner natural gas, will determine whether a well is commercially productive or not which then enables the oil and gas producer to further decide to invest the capitol into building a pipeline to such well or wells.

D. By giving this authority to the state corporation commission to make the determination for each case it will help take the problem now facing the producers on what to do to evaluate whether a natural gas well is commercially productive or not and whether to build a pipeline to such well. The producers need to be able to look to the state corporation commission for the authorization to perform these operations.

4. **In conclusion**: This is a basic and fundamental problem all natural gas producers face that needs to be corrected to give credibility to K.S.A. 55-102.

Therefore, Mr. Chairman and members or this Committee, we urge you to vote for an amended HB 3031 to include **all Natural Gas** under the authority of the state corporation commission.

Thank you for your time.

David P. Bleakley

5-2

Kansas Corporation Commission

Bill Graves, Governor John Wine, Chair Cynthia L. Claus, Commissioner Brian J. Moline, Commissioner

Testimony of Diana Edmiston
Senior Assistant General Counsel
State Corporation Commission of Kansas
Conservation Division
before the
House Utilities Committee
March 29, 2002

I am appearing here today to testify in support of House Bill 3031, which would amend K.S.A. 55-102 to allow venting and flaring of coalbed natural gas, if authorized by the Commission. K.S.A. 55-102 in its current form makes it illegal to vent or flare natural gas from the wellhead, except for two specific situations: 1) Gas may be vented for up to 7 days when oil or gas is first struck in the well; and 2) Natural gas produced in conjunction with the production of oil[1] may be vented if permitted by the Commission.

The Commission and Staff occasionally receive requests from oil and gas operators for permission to vent or flare gas in situations which do not fit the two exceptions stated above. K.S.A. 55-102 in its current form, does not authorize the Commission to grant these requests.

The Commission Staff has convened a committee comprised of industry representatives and Staff, for the purpose of developing proposed rules and regulations for coalbed methane production in Kansas. This committee has since developed proposed rules, including provisions for venting or flaring the gas in volumes and for periods of time appropriate for development of a successful coalbed methane project. However, the Staff advised the committee last October that it could not proceed with the venting and flaring portion of the proposed regulations unless or until the Kansas Statutes are amended to allow the activity. If however, legislation is enacted which would authorize the Commission to grant venting and flaring authority for coalbed projects, the proposed regulations covering such venting and flaring have been drafted, and are substantially ready to submit for formal approval and adoption through the rules and regulations process.

Should the members of the Committee have any questions I would be glad to address them. Thank you.

[1]This type of produced gas is commonly called "casinghead gas".

HOUSE UTILITIES
DATE: 3-29-02
ATTACHMENT 6