Approved: March 28, 2007
Date

MINUTES OF THE HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Chairman Carl Holmes at 9:00 A.M. on March 9, 2007 in Room 241-N of the Capitol.

All members were present.
Carl Holmes-excused
Vaughn Flora-excused
Judy Morrison-excused

Committee staff present:
Mary Galligan, Kansas Legislative Research
Dennis Hodgins, Kansas Legislative Research
Renae Hansen, Committee Assistant

Conferees appearing before the committee:
Ed Cross, KIOGA
David Bleakley, EKOGA

Others attending:
Twelve including the attached list.

Briefing on:
The State of the Kansas Oil and Gas Industry

Ed Cross, Kansas Independent Oil and Gas Association (KIOGA), (Attachment 1), spoke to the committee on the state of the Kansas Oil and Gas Industry using a PowerPoint presentation. Attached to his testimony was information about KIOGA, Kansas oil and gas statistics, statistics nationwide of individual states oil and gas production, a short biography, and a statement on "American Oil and Gas Needed to Solve our Energy Dilemma."

David Bleakley, Eastern Kansas Oil and Gas Association, (EKOGA), (Attachment 2), spoke to the committee on the state of the Eastern Kansas Oil and Gas Industry. He noted some of the new technologies to extract oil and gas from coal and shale deposits in primarily four counties in the southeast part of Kansas. He commented that the industry went through a 20 year depression, coming out of it in about 2001. Nationwide 350,000 workers were lost to the industry during this downturn cycle of the oil and gas industry.

Questions were asked and comments made by Representatives: Rob Olson, Oletha Faust-Goudeau, Vern Swanson, Don Myers, Terry McLachlan, Tom Moxley, Margaret Long, and Annie Kuether.

The next meeting is scheduled for March 13, 2007.

Meeting adjourned.

Unless specifically noted, the individual remarks recorded herein have not been transcribed verbatim. Individual remarks as reported herein have not been submitted to the individuals appearing before the committee for editing or corrections.

# HOUSE ENERGY AND UTILITIES COMMITTEE
# GUEST LIST

DATE: March 9, 2007

| NAME | REPRESENTING |
|---|---|
| Ed Cross | Ks Independent Oil & Gas Association |
| GINA BOWMAN-MORRILL | COFFEYVILLE RESOURCES, LLC. |
| DAVID BLEAKLEY | EASTERN KS. OIL & GAS ASS. |
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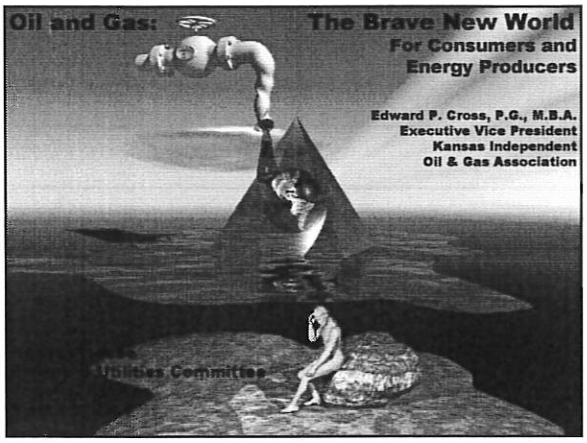


## Key Energy Issues

- Fossil Fuels provide over 80% of U.S. Energy Supply
- Oil & Natural Gas will provide 65% of Domestic Energy Needs for next 20-25 years
- Alternative Energy Investments will not alter U.S. Energy Mix for Decades
- Oil & Natural Gas Core Component

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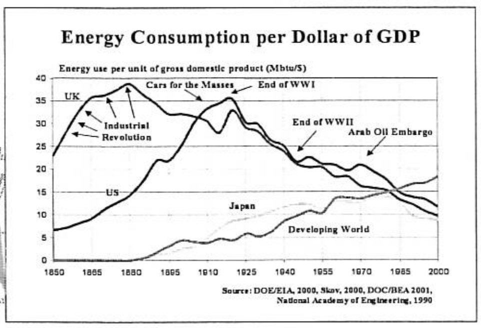
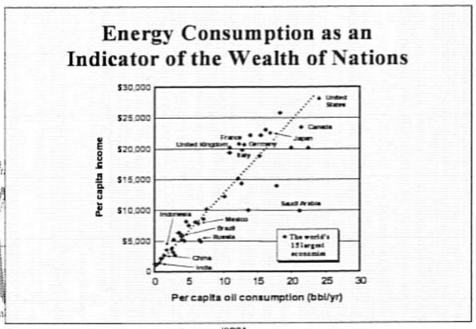
## Energy Intensity




ENERGY AND HOUSE UTILITIES
DATE: 3/9/2007
ATTACHMENT 1-1

## Defining National Quality

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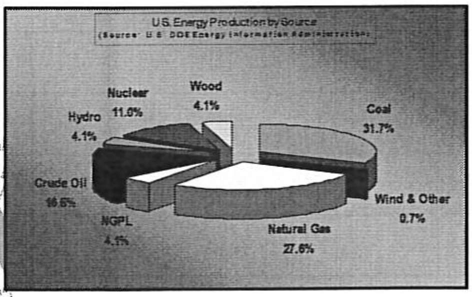
## U.S. Energy Issues

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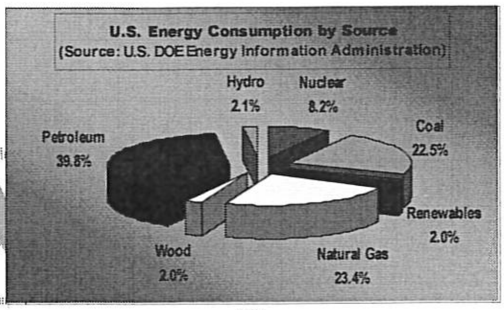
## U.S. Energy Issues

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## New World Realities

- Price Volatility
  - China
    - Account for 20-25% of global energy demand growth over next 15 years
    - Aggressively pursuing import sources
      - Peru, Canada, Russia, Brazil, Iran, Cuba, Gulf of Mexico
    - Bid on Nationalism versus ROI
  - India
    - Entered into energy agreement with China in December 2005
    - Built 18 refineries in past decade
    - Jamnagar Refinery adding 580,000 b/d new capacity to existing 680,000 b/d
    - Seeks to become regional supplier of refined products
      - Energy diplomacy part of their national foreign policy agenda
  - Venezuela
    - Tying free market barrels (spot market barrels) into long-term contracts
    - New refining capacity in Asia and Middle East
    - Purposely trying to move oil away from U.S.

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## New World Realities

- Crude Oil Pricing Differential
  - Canada
    - Number 1 Foreign Supplier of Crude Oil to U.S.
    - Quality Issues
      - Heavy/sour crude oil
    - Refining Capital Investments
      - Fewer end-products generated
    - Over-supplying local markets

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## New World Realities

- OPEC & non-OPEC Nations have Reached Productive Capacities
- OPEC can Maintain Productive Capacity for 30-40 years
- Oil Prices will be Driven by Demand
  - EIA projects 1.6% Global Demand Growth through 2030
  - U.S. Demand Increasing 1.2% Annually through 2030
  - Chinese Oil Demand up 35% in 2005
- U.S. production of crude oil declining by 1.17% annually
  - Currently import over 12 mbd
  - Imports will grow to 17 mbd by 2030
    - Imports rise 200,000 b/d/year for next 24 years
- World Oil Demand Remains Inelastic
- World Oil Supply will become Increasingly Inelastic

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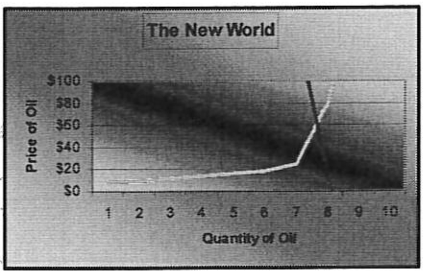
# OPEC Supply Leverage Diminishing

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# UNDEVELOPED U.S. OIL RESOURCES

Original, Developed and Future Domestic Oil Resources (Billion Barrels)

| | Original Oil In-Place | Developed to Date* | Stranded Oil In-Place | Future Recovery* Conventional Technology | EOR Technology | Total |
|---|---|---|---|---|---|---|
| *I. Crude Oil* | | | | | | |
| 1. Discovered | 582 | (208)[1] | 374 | - | 110 | 110 |
| ►**Light Oil** | **482** | **(189)** | **293** | - | **90[6]** | **90** |
| ►**Heavy Oil** | **100** | **(19)** | **81** | - | **20[7]** | **20** |
| 2. Undiscovered | 360[2] | | 360 | 119[5] | 60[8] | 179 |
| 3. Reserve Growth | 210[2] | | 210 | 71[5] | 40[8] | 111 |
| 4. Residual Oil Zone | 100[3] | ** | 100 | - | 20[9] | 20 |
| *II. Oil Sands* | 80[4] | ** | 80 | - | 10[10] | 10 |
| Total | 1,332 | (208) | 1,124 | 190 | 240 | 430 |

*Technically recoverable resources rounded to nearest 10 billion barrels.
**Less than 0.5 billion barrels.

[1] Includes 14 billion barrels of enhanced oil recovery.
[2] Estimated by Advanced Resources from USGS data, using historical recovery efficiency factors.
[3] Estimated by Advanced Resources.
[4] Advanced Resources data base.
[5] USGS National Assessments.
[6] Ten DOE/FE Basin Studies.
[7] Estimated by Advanced Resources.
[8] Estimated using recovery factors from ten DOE/FE basin studies.
[9] Three DOE/FE Residual Oil Zone (ROZ) Basin Studies.
[10] Estimated by Advanced Resources.

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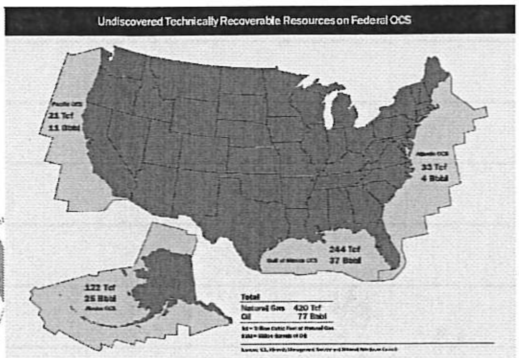


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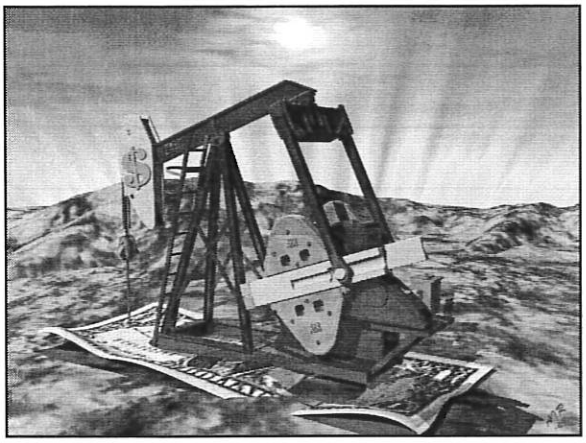

## Crude Oil Market Structure

- Oligopoly
  - OPEC Cartel Collude to Influence Market Prices
- U.S. Producers are Perfect Competitors
  - Price-takers not Price-makers
  - Cost Structure Optimization Determines Profit

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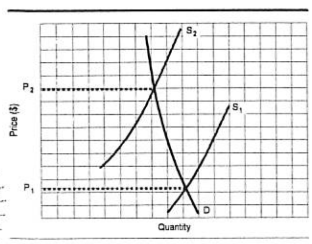
## Withholding Supply to Raise Price




When supply is lowered from $S_1$ to $S_2$, price rises from $P_1$ to $P_2$

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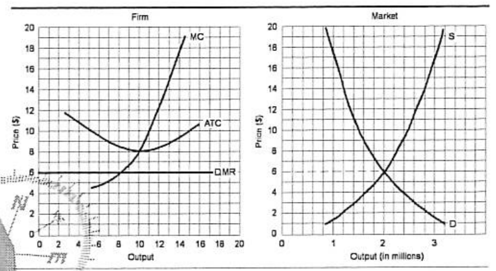
## The Perfect Competitor

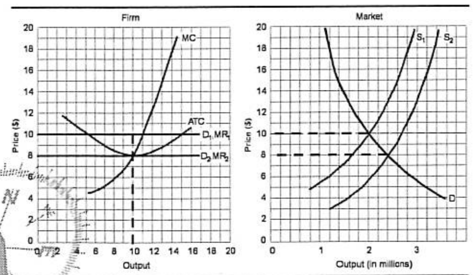



**Kansas Oil & Gas Producers are Perfect Competitors**

**Price-takers not price-makers. Internal cost structure determines profitability.**

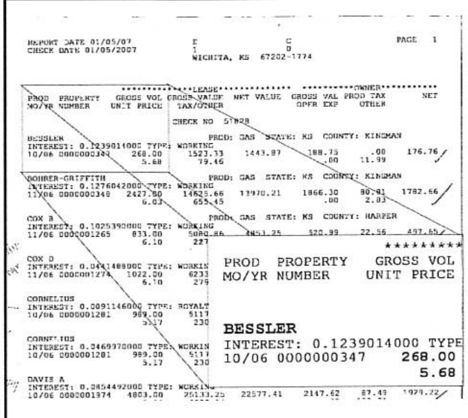
KOGA

## Effect of Supply Constraints on Perfect Competitor




**Kansas Oil & Gas Producers Strive to Improve Operating Efficiencies**

KOGA



REPORT DATE 01/05/07
CHECK DATE 01/05/2007
WICHITA, KS 67202-1774
PAGE 1

| PROD MO/YR | PROPERTY NUMBER | GROSS VOL UNIT PRICE | GROSS VALUE TAX/OTHER | NET VALUE | GROSS VAL OPER EXP | PROD TAX OTHER | NET |
|---|---|---|---|---|---|---|---|
| CHECK NO 51828 | | | | | | | |
| BESSLER INTEREST: 0.1239014000 TYPE: WORKING | | | PROD: GAS STATE: KS COUNTY: KINGMAN | | | | |
| 10/06 | 0000000347 | 268.00 5.68 | 1523.33 79.46 | 1443.87 | 188.73 .00 | .00 11.99 | 176.76 |
| BOHRER-GRIFFITH INTEREST: 0.1276042000 TYPE: WORKING | | | PROD: GAS STATE: KS COUNTY: KINGMAN | | | | |
| 11/06 | 0000000348 | 2427.00 6.03 | 14625.66 655.45 | 13970.21 | 1866.30 .00 | 80.01 2.83 | 1782.66 |
| COX B INTEREST: 0.1025390000 TYPE: WORKING | | | PROD: GAS STATE: KS COUNTY: HARPER | | | | |
| 11/06 | 0000001265 | 833.00 6.10 | 5080.86 227 | 4853.25 | 520.99 | 22.56 | 497.65 |
| COX D INTEREST: 0.0441488000 TYPE: WORKIN | | | | | | | |
| 11/06 | 0000001274 | 1022.00 6.10 | 6233 279 | | | | |
| CORNELIUS INTEREST: 0.0091146000 TYPE: ROYALT | | | | | | | |
| 10/06 | 0000001281 | 989.00 5.17 | 5117 230 | | | | |
| CORNELIUS INTEREST: 0.0469970000 TYPE: WORKIN | | | | | | | |
| 10/06 | 0000001281 | 989.00 5.17 | 5117 230 | | | | |
| DAVIS A INTEREST: 0.0854492000 TYPE: WORKING | | | | | | | |
| 10/06 | 0000001974 | 4803.00 | 25133.25 | 22577.41 | 2147.62 | 87.49 | 1929.22 |

PROD MO/YR PROPERTY NUMBER GROSS VOL UNIT PRICE

**BESSLER**
INTEREST: 0.1239014000 TYPE
10/06 0000000347 268.00 MCF/Month
5.68 $/MCF

## What is Marginal Oil & Gas

- Lower edge of profitability
  - High Cost
  - Low Yield
- 10 barrels of oil per day or less
- 60 thousand cubic feet (Mcf) per day or less
- When plugged, resource often lost forever
- Need policies to enhance American production and reduce dependence on foreign supplies

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## Who are Independents?

- Small Businesses
- Drill and produce crude oil and natural gas
- Not integrated
  - Sell crude oil and natural gas to purchasers
  - Price-takers not price-makers
  - Do not generate and market end-products

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## Who are Independents?

- Independents drill 90% of wells in U.S.
- Independents provide 82% of America's natural gas supply
- Independents produce 68% of the crude oil in the U.S.
- America's Oil & Natural Gas Industry

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# Kansas Oil & Gas Industry Statistics

- First Oil Well = 1860
  - Miami County
- First Natural Gas Well = 1873
  - Montgomery County
- Current # of Oil Wells = 40,850
- Current # of Gas Wells = 18,639
- Current # of Injection Wells = 15,428
- Current Total # of Wells = 74,654
- Current # of Operators = 2,113
- E&P Cost up 64% over last 3 years
- Current Oil Production
  - 35.7 Million Barrels Annually
  - 97,800 Barrels per Day
  - Ranked 8th Among 31 Oil Producing States
- Current Natural Gas Production
  - 370 Billion Cubic Feet Annually
  - 1.01 Billion Cubic Feet per Day
  - Ranked 8th Among the 32 Natural Gas Producing States
- Drilling Permits Issued in 2006 = 5,544
  - Permits Issued in 2005 = 3,704
- Drilling Rate = 92%
- Number of Active Drilling Rigs = 110

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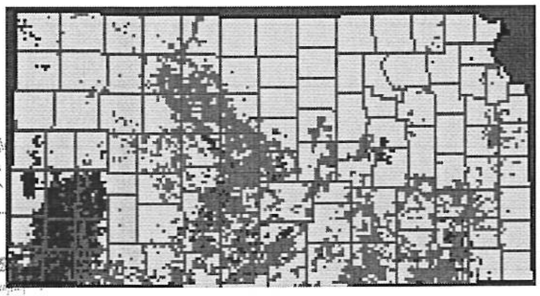
# Kansas Oil & Gas Fields



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# Kansas Oil & Gas Industry Statistics

- $4.7 billion Industry
- 2nd Largest Industry in Kansas
- Average Daily Oil Well Production = 2.27 BOPD
  - 72% of Total Kansas Crude Oil Production from Marginal Wells
  - 94% of Total Kansas Oil Wells
- Average Daily Natural Gas Well Production = 56 Mcf/Day
  - 74% of Total Kansas Natural Gas Production from Marginal Wells
  - 81% of Total Kansas Natural Gas Wells

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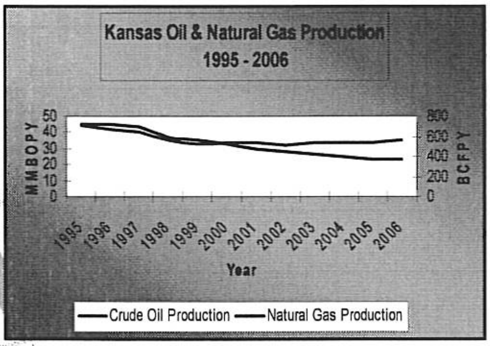


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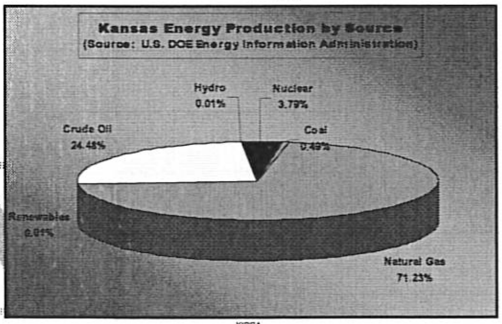
## Kansas Energy Issues

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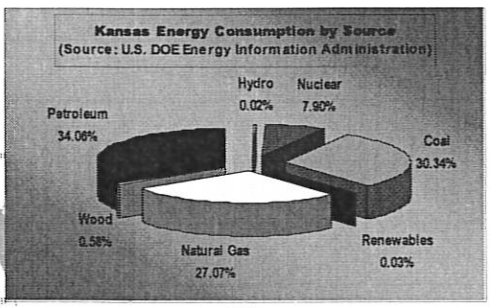
## Kansas Energy Issues

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## Key Challenges facing the Kansas Oil & Gas Industry

- Need Policies to Enhance Access to Capital
  - Develop & Maintain Production
  - Raise Capital Through Production
  - Historically re-invest over 100% of cash flow
  - Each well is like a new business
    - Over $1 billion invested in rural Kansas in 2006
- Need policies to cost-hedge against volatile crude oil and natural gas price swings
  - Monopsony
  - Budget marketing into economics and risk profiles
- Need policies to hedge against pricing differential

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## Key Challenges facing the Kansas Oil & Gas Industry

- Need innovative strategies to effectively recruit and retain qualified talent
  - Reciprocal Trades Accreditation
  - Mutual Recognition of Professional Credentials
  - Basic Entry-Level Training
- Need to maintain oil & gas R&D funding
  - Industry developing
    - Modeled after successful programs in Oklahoma, Texas, and North Dakota
  - Responsible
    - MHT Applications
    - Wireless Well Surveillance
    - Carbon Dioxide ($CO_2$) Sequestration Potential in Kansas Hugoton Field, Central Kansas Uplift, CBM Production Efficiency
  - More state, county, & local tax dollars and local economic development

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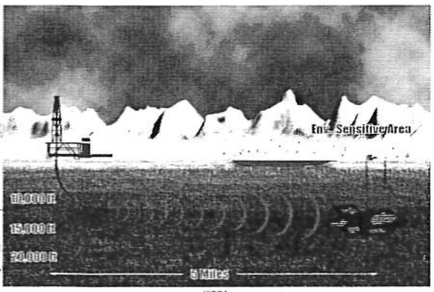
## MicroHole Technology (MHT) Applications

*Enabling Extended-Reach Drilling and Environmental Access via Pad Drilling*

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## Brave New World Conclusions

- No other nation produces as much oil and natural gas from marginal wells than the U.S.
  - Marginal wells produced NOT by major oil companies, but small independent companies
  - Marginal wells create jobs and economic growth in America
- Episode of higher more volatile prices than anything witnessed in past two decades.
- New price episode likely to last several years, or until cyclical or structural price trends are impacted by higher prices.

KIOGA

## A Brave New World

Our nation needs a comprehensive energy strategy that includes conservation, efficiency, alternatives, oil and natural gas. Out of absolute necessity, American oil and natural gas must provide us with a bridge to our alternative energy future.

Thank You

KIOGA

## Kansas Independent Oil & Gas Association (KIOGA)

Founded in 1937, the Kansas Independent Oil & Gas Association (KIOGA) is a nonprofit member organization representing oil and gas producers in Kansas, as well as allied service and supply companies. The purpose of KIOGA, as stated in the original articles of incorporation, is ". . . to improve the market for oil and gas produced in Kansas and to promote the welfare of the oil and gas industry in the State of Kansas."

With over 1,400 members, KIOGA is the lead state and national advocate for independent oil and gas producers in Kansas. The challenges facing the Kansas oil and gas industry continue to increase, in both number and complexity. Because of the efforts of KIOGA members, voters and policymakers in Kansas are learning that the oil and gas industry is working for them, the economy, and the environment.

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## Kansas Oil & Gas Industry Statistics

The Kansas oil and gas industry is nearly a $4.7 billion industry that puts tens of thousands of people to work each day and pumps hundreds of millions of dollars into the state's economy each year, money that helps support families, fund schools, and build roads. The Kansas oil and gas industry ranks just below agriculture as the most significant Kansas industry is terms of gross state product. Oil and gas is produced in 89 of Kansas' 105 counties and the average well depth is about 3,500 feet. The Kansas oil and gas industry does more than fuel Kansas and help the Kansas economy. The industry fuels America and makes significant positive contributions to our way of life.

**Date First Oil Well Drilled**: 1860 in Miami County

**Date First Gas Well Drilled**: 1873 in Montgomery County

**Date of First Oil Production**: 1889

**Date of First Natural Gas Production**: 1882

**Current Number of Oil Wells**: 40,850
Average daily oil well production = 2.27 bbls.

**Current Number of Natural Gas Wells**: 18,376
Average daily natural gas well production = 63 Mcf

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**Current Number of Class II Injection Wells**: 15,428

**Current Number of Licensed Operators** (Oil &/or Gas Producers): 2,113

**Current Oil Production Level**: 35.7 million barrels of oil per year
97,800 barrels of oil per day
Ranked 8th among the 31 oil producing states

**Current Natural Gas Production Level**: 370 billion cubic feet per year
1.01 billion cubic feet per day
Ranked 8th among 32 gas producing states

**Number of Permits to Drill in 2006**: 5,554 (2005: 3,704, 2004: 3,596, 2003: 2,626, 2002: 1,716)

**Drilling Rate (Percentage of drilling permits actually drilled)**: 92%

**Current Number of Wells being Drilled**: 110

**2nd largest industry in Kansas in terms of Gross State Product**
Employs approximately 7,700 Kansans in the production process
Employs an additional 17,200 Kansans in related services

**Contributed over $297 million in taxes during calendar year 2005**

**Contributed an estimated $300 million in taxes during calendar year 2006**

**Severance tax collections increased nearly 156% from 1999 to 2006**

**Ad valorem tax collections increased nearly 136% from 1999 to 2005**

**Kansas crude oil production declining by a Compound Annual Decline Rate (CADR) of 1.44% over the last 10 years**
State crude oil production up 5.3% in 2006
State crude oil production been steady to increasing for 7 years
Last period of state crude oil production increase was 1979-1985

**Kansas natural gas production declining by a CADR of 6.4% over the last 10 years**

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## Information About Oil

**What is oil?** Oil, commonly referred to as petroleum, is a naturally occurring substance made up a mixture of hydrogen and carbon compounds. Hydrocarbons occur as liquids, gases or solids.

**How is petroleum created?** Petroleum originated from marine plants and animals that decayed over time under ocean silt, sand or other materials. Millions of years, extreme pressure and heat transformed the biotic material into petroleum.

**When was the first oil well discovered?** In August of 1859, at Titusville, Pennsylvania, Col. Edwin Drake drilled the first oil well. The discovery at 69.5 feet in the Oil Creek formation was significant in that in demonstrated the practicality in drilling. Oil was first discovered in Kansas in 1860 in Miami County.

**Are we running out of oil?** Fossil fuels supply almost 95% of the world's energy and nearly 86% of the U.S. energy, even though hydro, nuclear and geothermal energy use has tripled since 1970. According to API statistics, world proven oil reserves are estimated at well over one trillion barrels, enough to last almost fifty years at current rates of consumption.

**What about the environment?** The oil and natural gas industry spends more than $10 billion annually to protect the environment worldwide—as much as the top 300 oil and natural gas companies earn in profits and more than the entire industry spends searching for oil and natural gas in the United States. Kansas' oil and natural gas industry has traditionally produced oil and natural gas to help meet the energy needs of society. Today's committed Kansas oil and natural gas producer continues to exercise their traditional service while still meeting their responsibility to protect the environment.

**How is petroleum used?** Oil and natural gas are an integral part of our society. Much of our high standard of living can be traced to the use of petroleum. Today, an estimated 6,000 products are produced from petroleum. Among these products are the many types of transportation fuels, industrial fuels and chemicals, residential fuels, lubricants, waxes, asphalt, fertilizers, pesticides, photographic film, plastics and medicine.

## Gasoline Taxes

A federal tax of **18.4** cents per gallon is collected in all states in addition to any state or local taxes on gasoline sales.

| State | State & Local Tax (Cents/Gallon) | State | State & Local Tax (Cents/Gallon) |
|---|---|---|---|
| Alabama | 21 | Montana | 27.8 |
| Alaska | 8 | Nebraska | 25.5 |
| Arizona | 19 | Nevada | 33.2 |
| Arkansas | 21.5 | New Hampshire | 20.6 |
| California | 32.4 | New Jersey | 14.5 |
| Colorado | 22 | New Mexico | 18 |
| Connecticut | 30.1 | New York | 32.95 |
| Delaware | 23 | North Carolina | 24.55 |
| DC | 20 | North Dakota | 21 |
| Florida | 30.2 | Ohio | 24 |
| Georgia | 12.7 | Oklahoma | 17 |
| Hawaii | 36.3 | Oregon | 24 |
| Idaho | 25 | Pennsylvania | 27.3 |
| Illinois | 26.7 | Rhode Island | 31 |
| Indiana | 23.3 | South Carolina | 16.75 |
| Iowa | 21.30 | South Dakota | 24 |
| **Kansas** | **25** | Tennessee | 21.4 |
| Kentucky | 21.4 | Texas | 20 |
| Louisiana | 20 | Utah | 24.5 |
| Maine | 26.1 | Vermont | 20 |
| Maryland | 23.5 | Virginia | 18.1 |
| Massachusetts | 23.5 | Washington | 28 |
| Michigan | 27.2 | West Virginia | 25.35 |
| Minnesota | 22 | Wisconsin | 31.5 |
| Mississippi | 18.8 | Wyoming | 14 |
| Missouri | 17 | Federal Tax | 18.4 |

## Comparative Product Prices versus Crude Oil

The following is a list of average prices of commonly purchased goods in the U.S.

| Product | Price | Normal Size | Volume Ounces | Price $/Gallon | Price $/Barrel |
|---|---|---|---|---|---|
| Crude Oil – Kansas Common | $58.00 | 1 Barrel | 5376 | $1.38 | $58.00 |
| Regular Unleaded Gas (pre tax) | $2.35 | 1 Gallon | 128 | $2.35 | $98.95 |
| Regular Unleaded Gas (after tax) | $2.79 | 1 Gallon | 128 | $2.79 | $117.18 |
| Coca Cola | $1.19 | 2 Liter | 67.6 | $2.25 | $94.50 |
| Poland Spring Water | $1.39 | 1.5 Liter | 50.7 | $2.63 | $110.46 |
| Milk – 2% | $2.59 | 1 Gallon | 128 | $2.59 | $108.78 |
| Evian (Bottled Water) | $1.79 | 1.5 Liter | 50.7 | $4.52 | $189.80 |
| Orange Juice | $2.69 | .5 Gallon | 64 | $5.38 | $225.96 |
| Snapple | $1.50 | 1 Quart | 32 | $6.00 | $252.00 |
| Perrier (Bottled Water) | $2.79 | 4 Pack | 44 | $8.12 | $340.89 |
| Budweiser | $4.79 | 6 Pack | 72 | $8.52 | $357.65 |
| Crisco Cooking Oil | $2.19 | 1 Quart | 32 | $8.76 | $367.92 |
| Lemon Oil | $3.49 | 48 Ounces | 48 | $9.31 | $390.88 |
| Scope Mouthwash | $3.69 | 24 Ounces | 24 | $19.68 | $826.56 |
| Sunflower Oil | $2.89 | 16 Ounces | 16 | $23.12 | $971.04 |
| Ben & Jerry's Ice Cream | $3.29 | 16 | 16 | $26.31 | $1,105.44 |
| Olive Oil | $10.99 | 1.5 Liter | 50.7 | $27.75 | $1,165.33 |
| Pinot Grigio (Italian White Wine) | $12.99 | 1.5 Liter | 50.7 | $32.80 | $1,377.40 |
| Head & Shoulders Shampoo | $4.59 | 15.2 Ounces | 15.2 | $38.65 | $1,623.41 |
| Real Maple Syrup | $4.59 | 12 Ounces | 12 | $48.96 | $2,056.32 |
| Sesame Oil | $5.99 | 12.7 Ounces | 12.7 | $60.37 | $2,535.61 |
| Tabasco Sauce | $0.99 | 2 Ounces | 2 | $63.36 | $2,661.12 |
| Jack Daniels | $19.49 | .75 Liter | 25.3 | $98.61 | $4,141.43 |
| Tanning Oil | $4.99 | 5 Ounces | 5 | $127.74 | $5,365.25 |
| Remy Martin Champagne | $36.99 | .75 Liter | 25.3 | $187.14 | $7,860.01 |
| Visine | $5.99 | 1 Ounce | 1 | $766.72 | $32,202.24 |
| Flonase (Prescription Nasal Spray) | $64.59 | 16 Grams | .56 | $14,763.45 | $620,064.00 |

**Edward P. Cross Biographical Sketch:**

Edward Cross is executive vice president of the Kansas Independent Oil & Gas Association (KIOGA) where he oversees all KIOGA business activities and programs. KIOGA is a 1,400 member trade association representing the Kansas independent oil and gas industry and is the lead state and national advocate for Kansas independent oil and gas producers. Cross actively represents the interests of the Kansas independent oil and gas industry before state and federal government officials and decision-makers. He is also active at the national level by serving on the Communications Committee and Public Education Committee of the Independent Petroleum Association of America (IPAA). The IPAA is a national oil and gas trade association headquartered in Washington, D.C. Cross serves as Secretary/Treasurer of the LIAISON Committee of Cooperating Oil and Gas Associations, a national organization of state oil and gas association executives. In addition, Cross serves as Chairman of the Public Outreach Committee of the Interstate Oil & Gas Compact Commission (IOGCC). The IOGCC is a national organization representing the Governors of 37 oil and gas producing states. Cross has published 8 peer-reviewed papers on economic, environmental, and energy education issues facing the independent oil and gas industry. Cross is a licensed professional geologist and certified school business official holding a B.S. in Geology and an M.B.A. from Southern Illinois University. In January 2007, Cross appeared before and briefed the U.S. Senate Committee on Finance in Washington, D.C. on marginal oil and gas production issues in Kansas.

Voice of the Kansas Independent Petroleum Industry

## Crude Oil and Natural Gas Production State Rankings

Source: Independent Petroleum Association of America 2005 Report

### Crude Oil Production

| State | mmbopy |
|---|---|
| 1. Texas | 407 |
| 2. Alaska | 356 |
| 3. California | 249 |
| 4. Louisiana | 90 |
| 5. New Mexico | 67 |
| 6. Oklahoma | 65 |
| 7. Wyoming | 52 |
| 8. Kansas | 36 |
| 9. North Dakota | 29 |
| 10. Colorado | 21 |
| 11. Montana | 19 |
| 12. Mississippi | 17 |
| 13. Utah | 13 |
| 14. Illinois | 12 |
| 15. Alabama | 8 |
| 16. Arkansas | 7 |
| 17. Michigan | 7 |
| 18. Ohio | 6 |
| 19. Florida | 3.3 |
| 20. Nebraska | 2.8 |
| 21. Kentucky | 2.5 |
| 22. Pennsylvania | 2.3 |
| 23. Indiana | 1.9 |
| 24. South Dakota | 1.2 |
| 25. West Virginia | 1.2 |
| 26. Nevada | 0.5 |
| 27. Tennessee | 0.4 |
| 28. New York | 0.2 |
| 29. Missouri | 0.1 |
| 30. Arizona | 0.05 |
| 31. Virginia | 0.02 |

### Natural Gas Production

| State | bcfpy |
|---|---|
| 1. Texas | 5,244 |
| 2. New Mexico | 1,604 |
| 3. Oklahoma | 1,558 |
| 4. Wyoming | 1,539 |
| 5. Louisiana | 1,350 |
| 6. Colorado | 1,011 |
| 7. Alaska | 410 |
| 8. Kansas | 368 |
| 9. Alabama | 346 |
| 10. California | 337 |
| 11. Utah | 268 |
| 12. Michigan | 237 |
| 13. West Virginia | 188 |
| 14. Arkansas | 170 |
| 15. Pennsylvania | 160 |
| 16. Mississippi | 134 |
| 17. Ohio | 94 |
| 18. Kentucky | 88 |
| 19. Montana | 86 |
| 20. Virginia | 81 |
| 21. North Dakota | 58 |
| 22. New York | 35 |
| 23. Florida | 3.1 |
| 24. Tennessee | 1.8 |
| 25. Indiana | 1.5 |
| 26. Nebraska | 1.4 |
| 27. South Dakota | 1.1 |
| 28. Oregon | 0.7 |
| 29. Arizona | 0.4 |
| 30. Illinois | 0.2 |
| 31. Maryland | 0.05 |
| **32.** Nevada | 0.001 |

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# American Oil & Gas Needed to Solve our Energy Dilemma

By Edward P. Cross, Executive Vice President
Kansas Independent Oil & Gas Association

The demand for energy in the U.S. is ever growing. Record-high energy costs impact our economy, national security and everyday lives. We need to find more and different sources of energy and we need to be efficient and conserve. But, we cannot ignore the essential role that American oil and natural gas must play.

American energy companies are currently restricted by the federal government in the areas where the greatest resources could be found. Ninety percent of the deep sea is off-limits, including 300 trillion cubic feet of natural gas and 50 billion barrels of crude oil. This alone could replace current levels of oil imports from the Persian Gulf for the next 59 years.

As it stands, 65% of our nation's oil supply comes from foreign and often unstable countries. We often hear that we should continue to import oil instead of pursuing our own reserves in areas currently under moratoria, like areas off the east coast, west coast, eastern Gulf of Mexico, Rocky Mountain areas, and the Alaska National Wildlife Refuge. Many Americans may not realize the full costs of oil imports. Many foreign oil producers are state-owned companies that use the money we pay them for their oil to promote anti-American ideas.

Wouldn't it be prudent to reduce our exposure to Middle East instability, civil unrest in Nigeria, political uncertainty in Venezuela, and accidents or natural disasters anywhere in the world? It is a shame that policies deny Americans the opportunity to produce their own natural resources, further increasing our foreign dependency and vulnerability.

Those opposed to tapping America's resources argue that energy exploration poses a significant environmental risk often citing a 1969 spill. But let's jump ahead 38 years to the present where technology has revolutionized exploration and production. Today, enhanced safety technologies along with strict adherence to government regulations ensured that virtually no oil or natural gas was spilled as a result of the devastating Hurricanes, Katrina and Rita, in 2005.

When all other countries including those with the most rigorous environmental restrictions allow their resources to be developed, we stand alone in forbidding the development of ours.

To reduce our dependence on Middle Eastern oil and other foreign energy sources, America must embrace all forms of American energy for the future – wind, solar, biomass, nuclear and fossil fuels. Today, fossil fuels provide over 80% of U.S. energy supply and oil and natural gas will supply two-thirds of our nation's energy needs 20-25 years in the future. The fact remains, that for the foreseeable future, oil and natural gas will be our main fuel source.

Fortunately, U.S. oil and natural gas companies are diverse and are ready to get to work to find new energy supplies here at home. Smaller, independent oil and natural gas companies already develop 90% of our nation's wells and produce 82% of American natural gas and 68% of the crude oil. And there's a lot more to be safely found.

Our nation needs a comprehensive energy strategy that includes conservation, efficiency, alternatives, oil and natural gas. Out of absolute necessity, American oil and natural gas production must provide us with a bridge to our alternative energy future. Ignoring the problems of today while we search for the perfect tomorrow is a sure formula for economic disaster. A "Just Say No" energy policy that extends to all viable energy supply solutions, including nuclear energy, hydroelectric projects, coal, oil, and natural gas is simply unworkable. Americans deserve more than talk about what won't work. This country needs energy solutions and it should begin with freedom of American companies to develop American natural resources.

# STATE OF THE EASTERN KANSAS OIL AND GAS INDUSTRY

## Overall Welfare of the Industry

Gas

Coal Bed Methane Gas (CBM) –

Conventional Gas –

Gas Price –

Expenses –

Oil

Conventional Oil –

Oil Price –

Expenses –

## General Benefits to the Local economy, County and State

Local –

County –

State –

## County & State Government and their Impact on the Industry

County –

State –

Legislature –

Agencies of the State that deal with the oil and gas industry

Kansas Corporation Commission (Oil and Gas Division) –

Kansas Department of Health and Environment (KDHE) –

Kansas Fish and Wildlife –

Kansas Geological Survey (KGS) –

Groundwater Management –

Kansas Department of Revenue (KDOR) –

Oil and Gas Advisory board –

Future Energy Sources

The state of Kansas and the country will need every source of Energy available to meet future demand.

Oil –

Gas –

Nuclear –

Coal –

Wind Energy –

Solar –

Ethanol –

Biofuel –

Hydrogen –