

WVU Extension Service Oil and Natural Gas Education Program Public Education Program History

November 2010 – May 2011

Fundamentals of Natural Gas Exploration and Leasing

- 1. Overview of the Natural Gas Industry**
 - a. Dr. Tim Carr, WVU Marshall Miller Professor of Geology*
- 2. Video of Horizontal and Hydraulic Fracturing Natural Gas Drilling Process**
- 3. Overview and Responsibilities of the WVDEP Office of Oil and Gas**
 - a. David Belcher, WV Department of Environmental Protection*
- 4. Water Issue Related to Natural Gas Exploration**
 - a. Dr. Paul Ziemkiewicz, West Virginia Water Research Institute*
- 5. Understanding and Negotiating a Natural Gas Lease – Leasing Basics**
 - a. Attorney Andrew Graham, Steptoe and Johnson*
- 6. Environmental Impacts of Marcellus Shale Gas Development**
 - a. John King, WV Department of Environmental Protection*

November 2011 – December 2011

Water, Air, and Natural Gas Drilling

- 1. WV Regulations Regarding Marcellus Shale**
 - a. Delegate Tim Manchin, Marion County and Douglas Facemire, Braxton County*
- 2. WV Source Water Protection Program for Public Water Supplies and Private Wells,**
 - a. Office of Environmental Health Services (OEHS), Environmental Engineering Division – Public Water Supply Program*
- 3. WVDEP Air Quality Rules and Regulations Regarding the Natural Gas Industry**
 - a. John King, WVDEP Office of Environmental Advocate*

March 2012 – April 2012

Aquatic Life, Roads, and Natural Gas Drilling

1. Aquatic Impacts of Marcellus Shale Gas Development

a. Frank Jernejcic, Fisheries Biologist, WV Division of Natural Resources

2. Damage to Roads: Who is Responsible for Permitting, Maintenance, and Repairs?

a. Gary Clayton, NE Regional Maintenance Engineer and Central Coordinator for Natural Gas Permitting, WV Department of Transportation

June 2012

1st Annual Enhancing Public Understanding of Natural Gas Issues Conference

1. Addressing Public Health Concerns

a. Simon Lomax, Research Director, Energy In Depth

2. Seismology, Seismic Testing, and Earthquakes

a. Dr. Ronald McDowell, WVGES

3. Safety on NG Well Sites

a. Dr. Brandon Takacs and Wayne Lundstrom, WVU Extension Safety and Health Extension

4. Ideas for Managing Your Gas Windfall

a. Dr. Cathy Bowen, Consumer Issues, Department of Agriculture and Extension Education, The Pennsylvania State University

5. Property Insurance Impacts

a. West Virginia Offices Of The Insurance Commissioner

6. Banking/Mortgaging/Financing Issues With Private Property

a. Wesbanco

7. Natural Gas Drilling Impacts on Private Property Values

a. WV Tax Department, Property Tax Assessment Division

January - February 2013

Utica Shale Development and Leasing

1. Developing the Utica Shale

a. *Dr. Robert Chase, Professor and Chair, Department of Petroleum Engineering and Geology at Marietta College*

2. Utica Shale: Look Before You Lease

a. *Peggy Kirk Hall, Assistant Professor and Field Specialist, Agricultural & Resource Law, The Ohio State University*

Natural Gas Pipelines: Logistics, Negotiating, and Regulations

1. Pipeline Rights of Way: Negotiations for Landowners

a. *Craig R. Sweger, Former Director of the University of Pittsburgh's, Agricultural Entrepreneurship Program and Pennsylvania farmer*

2. Environmental Permit Considerations and Requirements for Natural Gas Pipeline Installation

a. *John Keeling, Vice President, MSES Consultants Inc.*

May 2013

2nd Annual Enhancing Public Understanding of Natural Gas Issues Conference

1. Environmental Risk Assessment for Shale Gas Development

a. *Dan Soeder, National Energy Technology Laboratory
Department of Energy*

2. Panel Presentation:

a. *Health Issues and Concerns Related to Marcellus Shale Gas Development, Jill Kriesky, Southwest Pennsylvania Environmental Health Project*

b. *Minimization Strategies for Noise, Dust & VOCs, Renu Chakrabarty, WVDEP*

c. *A Study of Water Wells Near Marcellus Gas Drilling Sites,
Bryan Swistock, Penn State University Cooperative Extension*

3. Land Ownership and Landowner Rights Related to Natural Gas Development

a. *Jay Leon, Esq., Morgantown, WV*

4. Farming Over the Marcellus

a. *Mark Madden, Penn State University Cooperative Extension Service*

5. **Overview of Water and Wastewater Treatment for Beneficial Reuse**
 - a. *Charles Kozora, Aquatech*
6. **Reclamation on Natural Gas Well Sites: Site Construction 22-6A Horizontal Well Control Act**
 - a. *Steve Young, WVDEP Office of Oil and Gas*
7. **WV Erosion and Sediment Control**
 - a. *Richard Campbell, WVDEP Office of Oil and Gas*

October 2013

Monitoring of Marcellus Drilling Operations

Dr. Michael McCawley, Department of Occupational & Environmental Health Sciences, WVU School of Public Health

November 2013

Gas Well Drilling and Your Private Water Supply

Brian Swystock, Penn State Cooperative Extension Service

May 2014

3rd Annual Enhancing Public Understanding of Natural Gas Issues Conference

1. **An Environmental Dream or Regulatory Nightmare? In Pursuit of a New Public Trust Through Hydraulic Fracturing Law and Regulation**
 - a. *Josh Fershee, Center for Energy and Sustainable Development, WVU College of Law*
2. **Panel Presentation: Fire Safety, Prevention and Control On Well Sites**
 - a. *Matt Reed: WV State Fire Academy*
 - b. *Tom Hart: Marshall County EMS*
 - c. *Michael Wolford: Wild Well Control*
3. **WV Water Research Institute Water Studies Update**
 - a. *Paul Ziemkiewicz, Director of the WV Water Research Institute*
4. **Researching Private Property at the Courthouse**
 - a. *Vickie Gorrell, Assessor, Pleasants County*
Charlotte Lamp, Deputy Assessor, Pleasants County

5. Disposal of Drilling Wastes

a. Mark Holstine, WV Solid Waste Management Board

6. WVU Survey of Landowners and Their Mineral Rights

a. Dr. Alan Collins, Professor and Assistant Director, WVU Division of Resource Management Chair, Agricultural and Resource Economics Program

7. WV Shale Gas Network

a. Trina Karolchik Wafle, Coordinator and Deputy Director, National Research Center for Coal and Energy, WVU

Look Before You Lease: Oil and Gas Lease Considerations for Landowners

Clif Little, Associate Professor, OSU Extension Educator, Agriculture and Natural Resources, Guernsey County
Peggy Kirk Hall, Assistant Professor and Field Specialist, Agricultural & Resource Law, College of Food, Agricultural & Environmental Sciences OSU Extension

July 2014

Understanding Renegotiation and Renewal Natural Gas Leases

Eric Gordon: Berry, Kessler, Crutchfield, Taylor and Gordon
Attorneys at Law

October 2014

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November 2014

Shale Mineral Management: Understanding Your Royalties

In cooperation with Penn State University Cooperative Extension

Managing Natural Gas Windfalls: Savings & Investments

Fred Scheeren, Managing Director-Investments, Wells Fargo Advisors, LLC

January and March 2015

Planning for Financial Success and Managing Windfalls When They Come
Fred Scheeren, Managing Director-Investments, Wells Fargo Advisors, LLC

May 2015

4th Annual Enhancing Public Understanding of Natural Gas Issues Conference

1. The Future of Natural Gas in West Virginia

Dr. John Deskins, Director/Associate Professor of Economics, West Virginia University College of Business and Economics, Bureau of Business and Economic Research

2. Panel Presentation: Talkin' the Bakken

West Virginia University Extension Service Natural Gas Education Team 2015 Educational Tour

- a. Georgette Plaughter, Natural Gas Team Coordinator, West Virginia University Extension Service*
- b. John King, West Virginia Department of Environmental Protection*
- c. Joshua P. Fershee, Professor of Law, West Virginia University College of Law*
- d. Karen Cox, Ohio County Extension Agent, West Virginia University Extension Service*

3. Above Ground Storage Tank Regulations in the Natural Gas Industry

Joe Sizemore, West Virginia Department of Environmental Protection

4. Mineral Management: Understanding Royalty Payments

Ryan Nestor, CPA, CGMA, Arnett, Carbis, Toothman, LLP, Bridgeport, WV

5. Citizens Service Programs

John King, Environmental Resources Analyst, West Virginia Department of Environmental Protection

6. Conservation Easements and Natural Gas Exploration

Joe Hatton, USDA/NRCS

7. Underground Injection Control Program in West Virginia

Tom Bass, West Virginia Department of Environmental Protection

8. West Virginia University and The Ohio State University Marcellus Shale Energy and Environmental Shale Laboratory (MSEEL)

Dr. Brian Anderson, WVU College of Engineering and Mineral Resources, Department of Chemical Engineering

July 2015

Understanding Unitization of Interests or “Forced Pooling”

Joshua Fershee, Associate Dean for Faculty Research and Development and Professor of Law, WVU College of Law; Delegate Lynwood “Woody” Ireland (R-Ritchie, 07); Delegate Pat McGeehan (R-Hancock, 01); and Senator Mike Romano (D-Harrison, 12).

October 2015

Making Sense of Natural Gas Pipelines and Right of Way Agreements

Dave Messersmith, Penn State Extension Educator and Brad Stephens, Stephens Law Office.

May 2016

5th Annual Enhancing Public Understanding of Natural Gas Issues Conference

1. What to Look for in an Ethical and Professional Landman

Dr. Shawn Grushecky, Energy Land Management Coordinator, WVU Davis College of Agriculture, Natural Resources, and Design, School of Natural Resources

2. Land Use Planning for Oil and Gas Development in WV Communities

Katherine Garvey, Director, WVU College of Law Land Use and Sustainable Development Law Clinic

3. Panel Presentation: Natural Gas Industry Update

a. What’s Happening Now and What Does the Future Hold?

Jackie Romeo, WV Royalty Owners Association

- b. 2016 Draft Horizontal Well Revision Rules
Jason Harmon Assistant Chief of the Office of Oil and Gas, WV Department of Environmental Protection

- c. Marcellus Shale Energy and Environment Laboratory
Dr. Shika Sharma, WVU Department of Geology and Geography

- 4. Marcellus Shale Natural Gas Reclamation on Drilling Sites
Jeff Skousen, Professor of Soil Science and Extension Land Reclamation Specialist, WVU Davis College of Agriculture, Natural Resources and Design and WVU Extension Service

- 5. Looking Out for Wildlife: Habitat Improvement After Oil and Gas Development
Dr. Sheldon Owen, WVU Extension Service Wildlife Specialist

- 6. Maintaining and Protecting Your Private Water Supply
Georgette Plaucher, WVU Extension Service Oil and Gas Education Program Coordinator and Greg Hamons, WVU Extension Service Ag. and Natural Resources Extension Agent-Pocahontas County

- 7. Pipeline Safety for Landowners
Tom Stockdale and Tiffany Rice, WVU Extension Service Safety and Health

- 8. Helping Landowners Understand Property Taxation and Property Assessment Issues with Oil and Gas
Ryan Nestor, CPA, CGMA: Arnett, Carbis, and Tootman, LLP