

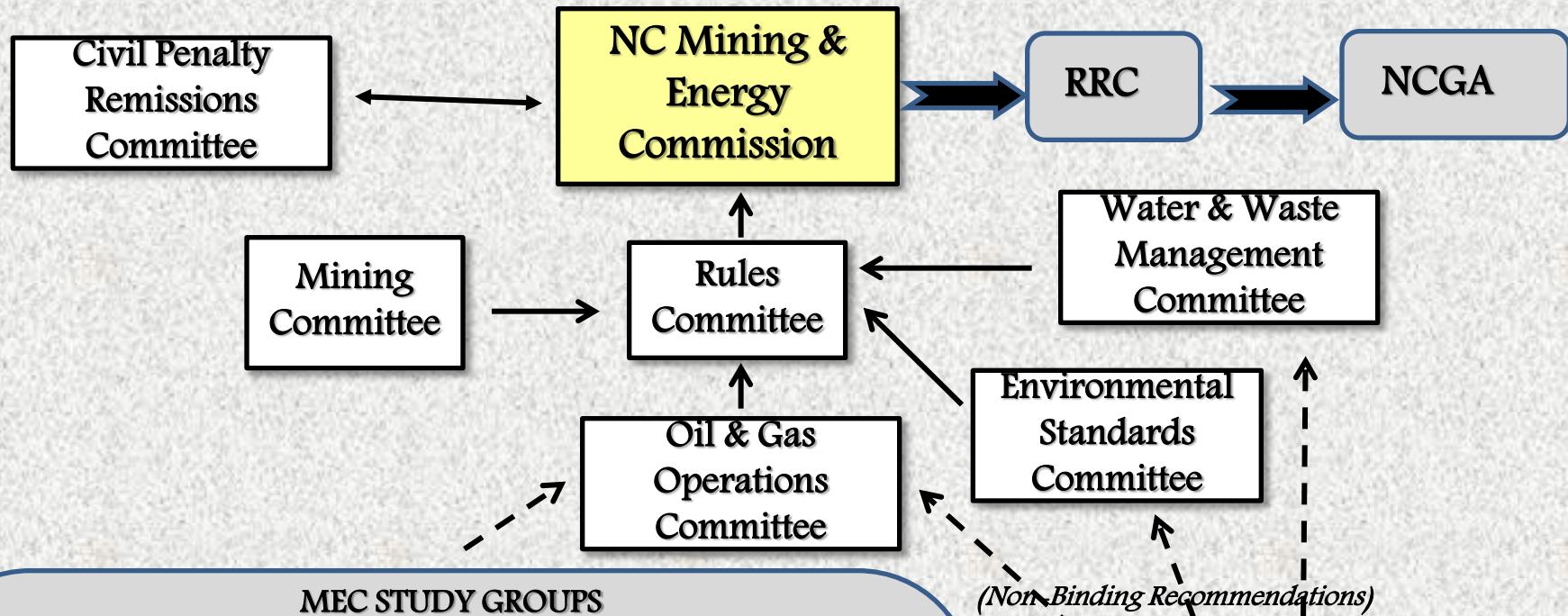
Update on Oil & Gas Regulatory Framework

February 4, 2014

Presented by:

North Carolina Mining & Energy Commission





MEC STUDY GROUPS

Session Law 2012-143

Local Government
Regulations Study
Group

Compl: 1 Oct 2013

Funding Levels &
Potential Funding
Sources Study Group

Compl: 1 Oct 2013

Compulsory Pooling
Study Group

Compl: 1 Oct 2013

Session Law 2013-365

Coordinated Permitting
Study Group

Due: 1 Mar 2014

Severance Tax Study
Group

Due: 1 Apr 2014

Landmen Registry
Study Group

Due: 1 Apr 2015

Internally Generated by MEC

Protection of
Trade Secrets &
Proprietary
Information Study
Group

Various White
Papers

(Non-Binding Recommendations)

STAKEHOLDER GROUP

(Managed by NC DENR)

Local Jurisdictions, Technical Experts,
Environmental Interests, RAFI, API,
ANGA, NC DENR, NCDOT, NCDHHS,
NC DOJ, Commerce, Agriculture,
Wildlife Resources, Emergency
Management

NC General Assembly

MEC Accomplishments

- MEC Constituted by Statute-- 1 Aug 2012
- MEC Sworn In at First Meeting-- 6 Sep 2012
- By-Laws Adopted & Committees Assigned-- 2 Nov 2012
- Staff Research & Presentations Began-- 18 Dec 2012
- Study Groups Began Meeting-- 8 Feb 2013
- First Rules Passed by MEC-- 3 May 2013
- Study Group Reports Transmitted-- 27 Sep 2013

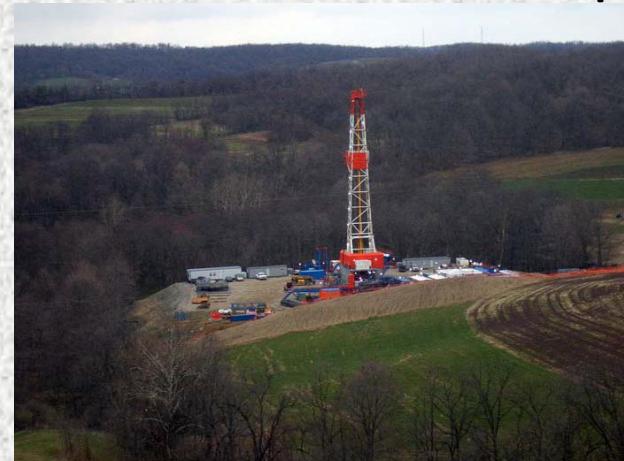
Anticipated Milestones

- Subsequent Study Group Reports-- Mar/Apr 2014
- Completion of MEC Internal Rule-making-- May 2014
- Public Comment Period-- June/July 2014
 - 3 Public Hearings
- MEC Adoption of Rule-set-- 5 Sep 2014*
- RRC Consideration of Rules-- 16 Oct 2014

**S.L. 2012-143 Requires Adoption by 1 Oct 2014*

Anticipated Development Milestones*

- 2-D & 3-D Seismic Studies- Spring 2014
- Vertical Well & Core Drilling- Summer/Fall 2014
- NCGA 'Green Light' for Permitting-- O/A 1 Mar 2015
- First Horizontal Wells Permitted- April 2015
- ~5 Wells Completed- 2015
- ~15 Wells Completed- 2016
- ~55 Wells Completed- 2017
- ~140 Wells Completed- 2018



**Depends heavily on demand for and market price of gas; NGL content in the gas; maturation of mid-stream infrastructure; among other variables.*

Committee Updates

Administration of Oil & Gas Operations Committee

Charles Holbrook- Chairman

- Update on Committee Rules Completion:
 - *Well Construction Rules* – *MEC Approved*
 - *Well Spacing Rules* - *MEC Approved*
 - *Well Closure Rules* - *MEC Approved*
 - Site Development Rules – 12 Feb 2014
 - Operations & Production Rules – 12 Feb 2014
 - Coordinated Permitting Rules – 17 Feb 2014
 - Bonding & Reclamation Rules - 17 Feb 2014
 - Unitization & Pooling Rules – 6 Mar 2014
 - Enforcement & Penalty Rules - 6 Mar 2014



Administration of Oil & Gas Operations Committee

Need General Assembly's Help:

- MEC & Department Need Explicit Variance Authority
 - Vertical Separation Distances
 - Horizontal Set-back Distances
- Legislative intent needed on regulating Mid-Stream Infrastructure (Utilities Commission or MEC)
- MEC needs explicit authority to establish permit criteria
- DENR needs explicit authority for permit denials



Water & Waste Management Committee

Environmental Standards Committee

- Update on Committee Rules Completion :
- Baseline & Subsequent Testing Rules - *MEC Approved*
- Chemical Disclosure Rules - *MEC Approved*
- Set-Back Rules - *MEC Approved*



Water & Waste Management Committee

Environmental Standards Committee

Need General Assembly's Help:

- Reduce from 5000' – 2500' the distance from wellhead within which recurring water sampling is required
- Need explicit authority from NCGA for DENR to review trade secrets asserted by industry; and to deny use of materials or methods which pose potential health or safety risks

Special Challenge:

- Develop health, safety, aesthetic, or other objective justification for each established set-back**

***No evidence of this being done in any other state*

Rules Committee

Amy Pickle- Chairwoman

- Update on Committee Rules Completion :

• Administrative Rules –	7 Mar 2014
• Definitions -	3 Apr 2014
• Full Rules Bundle Ready for MEC –	2 May 2014



Rules Committee

Public Comments, Adoption, RRC Review:

- Public Comment Period: 2 June – 1 Aug 2014
- Public Hearings (3 ea.) June / July 2014
 - Near Deep River Basin
 - Near Dan River Basin
 - Raleigh
- Work Sessions on Comments 24 July – 4 Sep 2014
- MEC Adoption 5 Sept 2014
- RRC Review 16 Oct 2014



Coordinated Permitting Study Group

Dr. Kenneth Taylor, Director

Coordinated Permit Scope & Caveats

- Single, Coordinated, Digital Permit for each Site of One or more Wells
- Addresses Well Development through Well Completion
- Production & Post-production Activities May Require Additional Permits or Plans
- Waste Management is part of Permit
- NCDOT Coordination is Separate
- Off-site Disposal of Solid Wastes
- Water re-use strongly encouraged
- Sedimentation Control Commission Coordination
- Environmental Management Commission Coordination

Coordinated Permitting Study Group

Dr. Kenneth Taylor, Director

Findings & Recommendations

- Single, Coordinated Digital Permit is Possible
- Follow same general procedures as Mining Permits
- Need statutory language specifying agencies to participate
- Need oil & gas permit denial criteria
- Need to establish reasonable time period for permit review
- Need to establish required permit content
- Must establish public notification procedures



Pooling, Unitization, & Statutory Needs

Dr. Ray Covington, Director

- Current North Carolina law authorizes the voluntary and compulsory pooling of the rights of landowners in order to develop their lands as a drilling unit. The General Assembly enacted the Oil and Gas Conservation Act of 1945 to allow pooling to prevent waste of oil and gas in the state.

- The Study Groups scope included:

- Statutory Review
- Rules in other states
- Surface Use agreements
- Severed estates
- Pooling
- Unitization

- Full report: <http://portal.ncdenr.org/web/mining-and-energy-commission/compulsory-pooling-agendas>



Pooling, Unitization, & Statutory Needs

Dr. Ray Covington, Director

Findings and Recommendations**

- Mineral Rights Clarifications Needed (NCGA Action)
- Surface Use Agreements Required
- Fair and Reasonable Offer
- Landowner Protections
- Cost Sharing Options
- Risk Penalty Provisions
- Time Limitation on Pooling Order
- Indemnification
- Notice and Reporting
- 90% Secured Lease Recommended

***Need Legislative Intent on each; to be regulated by Statute or by Rule-Making*

Questions?

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To stay abreast of the activities of the Mining and Energy Commission

Join the Shale Gas Listserv at:

<http://lists.ncmail.net/mailman/listinfo/denr.shale.gas>

Or

Visit the Mining and Energy Commission web page at:

<http://portal.ncdenr.org/web/mining-and-energy-commission/home>



Back-up Slides

Senate Bill 820 (2012-143)

Clean Energy & Economic Security Act

- Establishes the Mining & Energy Commission
- Requires a Modern Regulatory Program for Oil & Gas Development
- Authorizes Horizontal Drilling & Hydraulic Fracturing
- Enhances Landowner & Public Protections
- Establishes Joint Legislative Commission on Energy Policy

Senate Bill 76 (S.L. 2013-365)

Domestic Energy Jobs Act

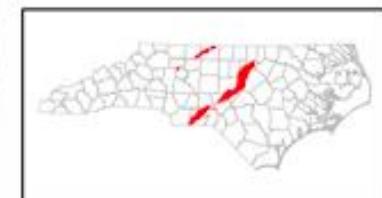
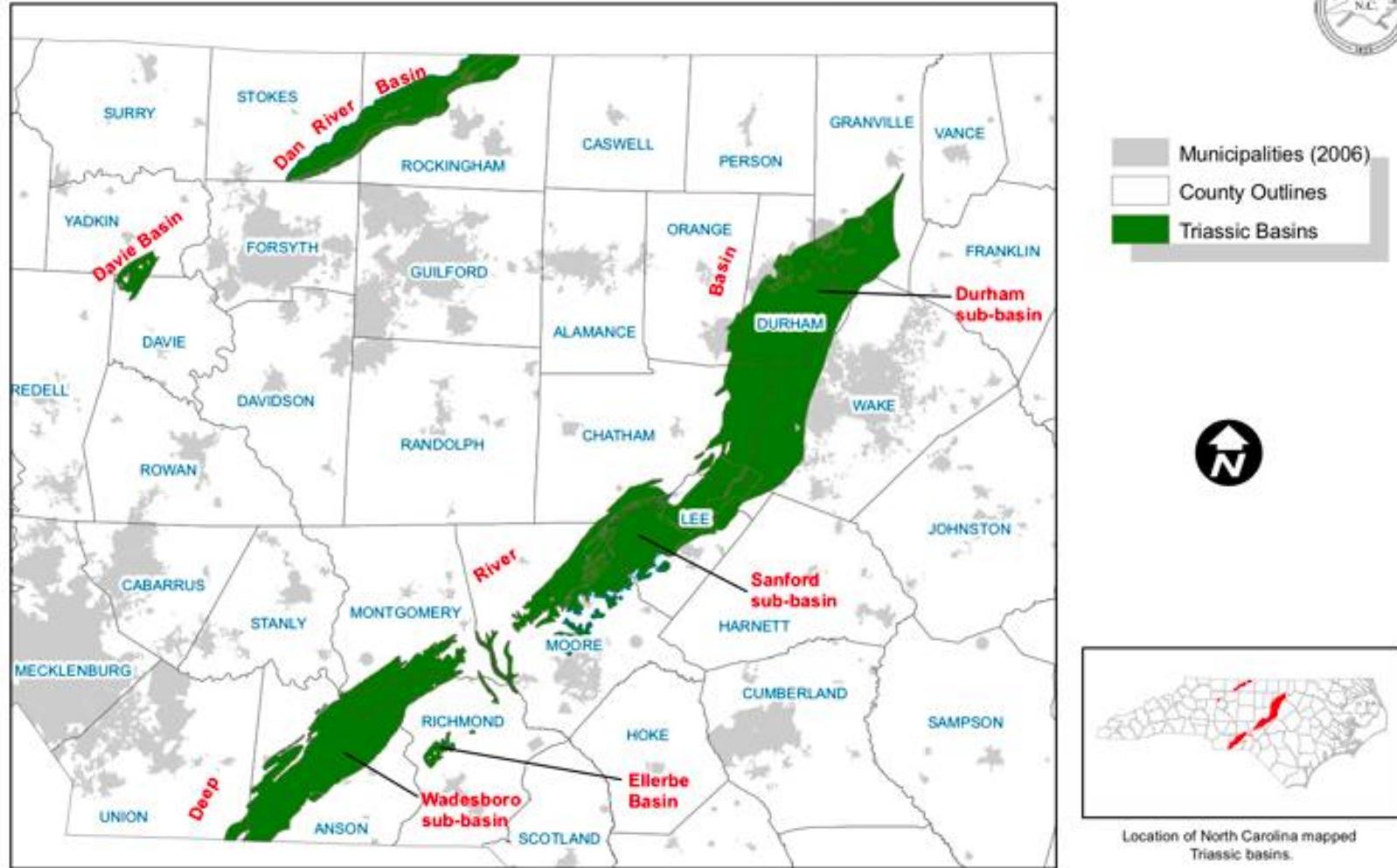
- Streamlines Regulatory Process by Waiving Fiscal Notes
- Mandates Legislative Review of Rules before Commencement of Drilling
- Requires Special Study of Coordinated Permitting
- Requires Special Study of Landmen Registration and Taxation of Hydrocarbons
- Establishes Energy Policy Council

Active Shale Gas Plays in U.S.



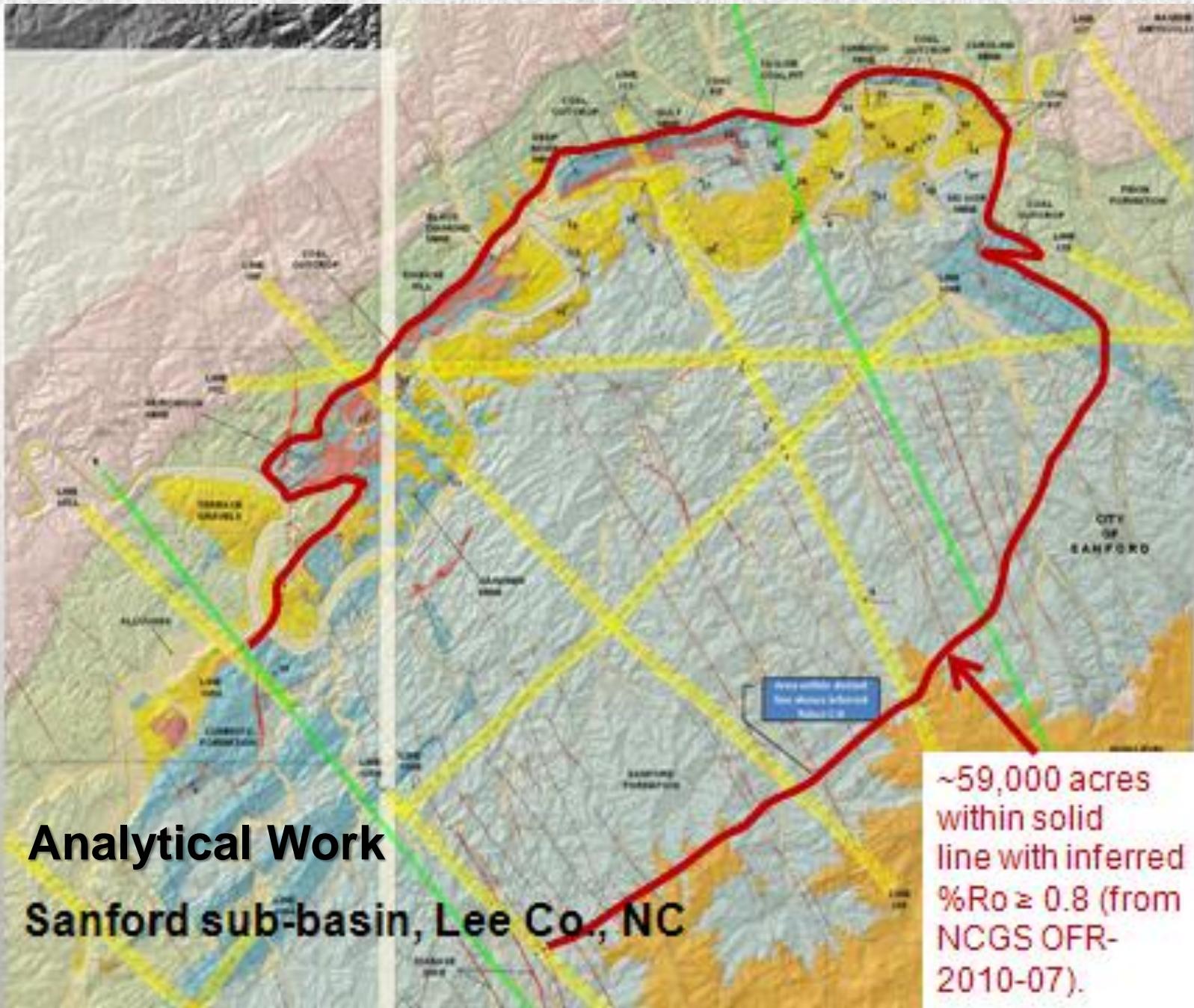
Expected NC Shale Gas Reserves

Exposed North Carolina Triassic Rift Basins



Location of North Carolina mapped Triassic basins.

0 10 20 30 40 Miles

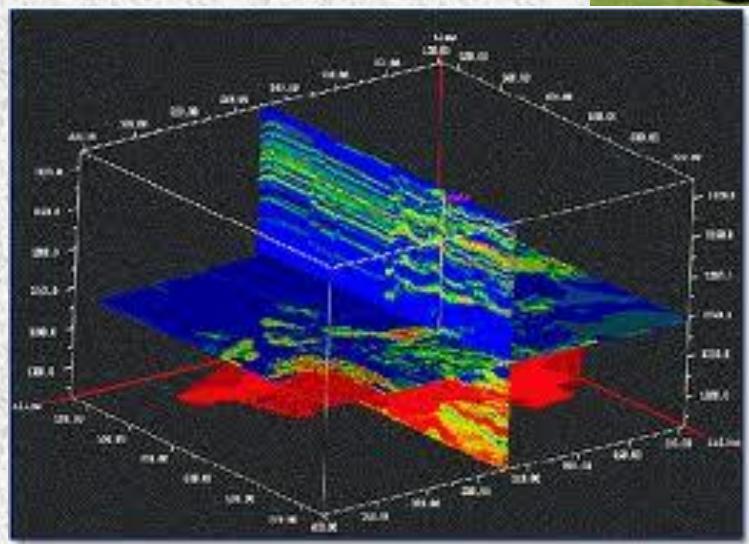


Analytical Work

~~Sanford sub-basin, Lee Co., NC~~

~59,000 acres
within solid
line with inferred
 $\%Ro \geq 0.8$ (from
NCGS OFR-
2010-07).

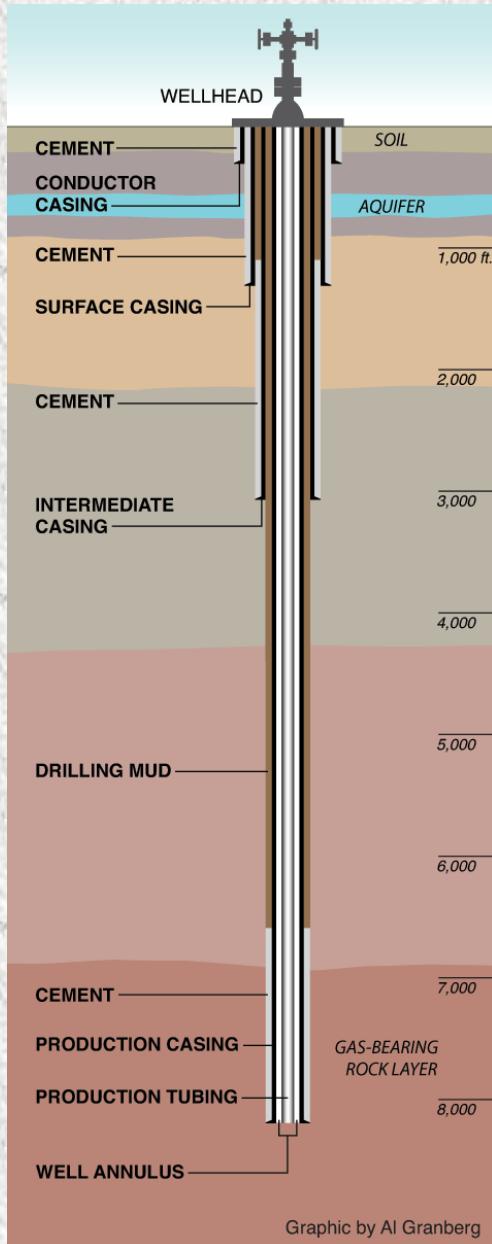
3-D Seismic Work



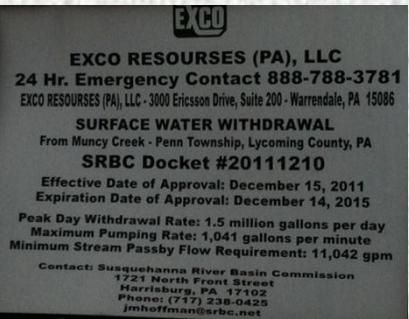
Oil & Gas Well Sites



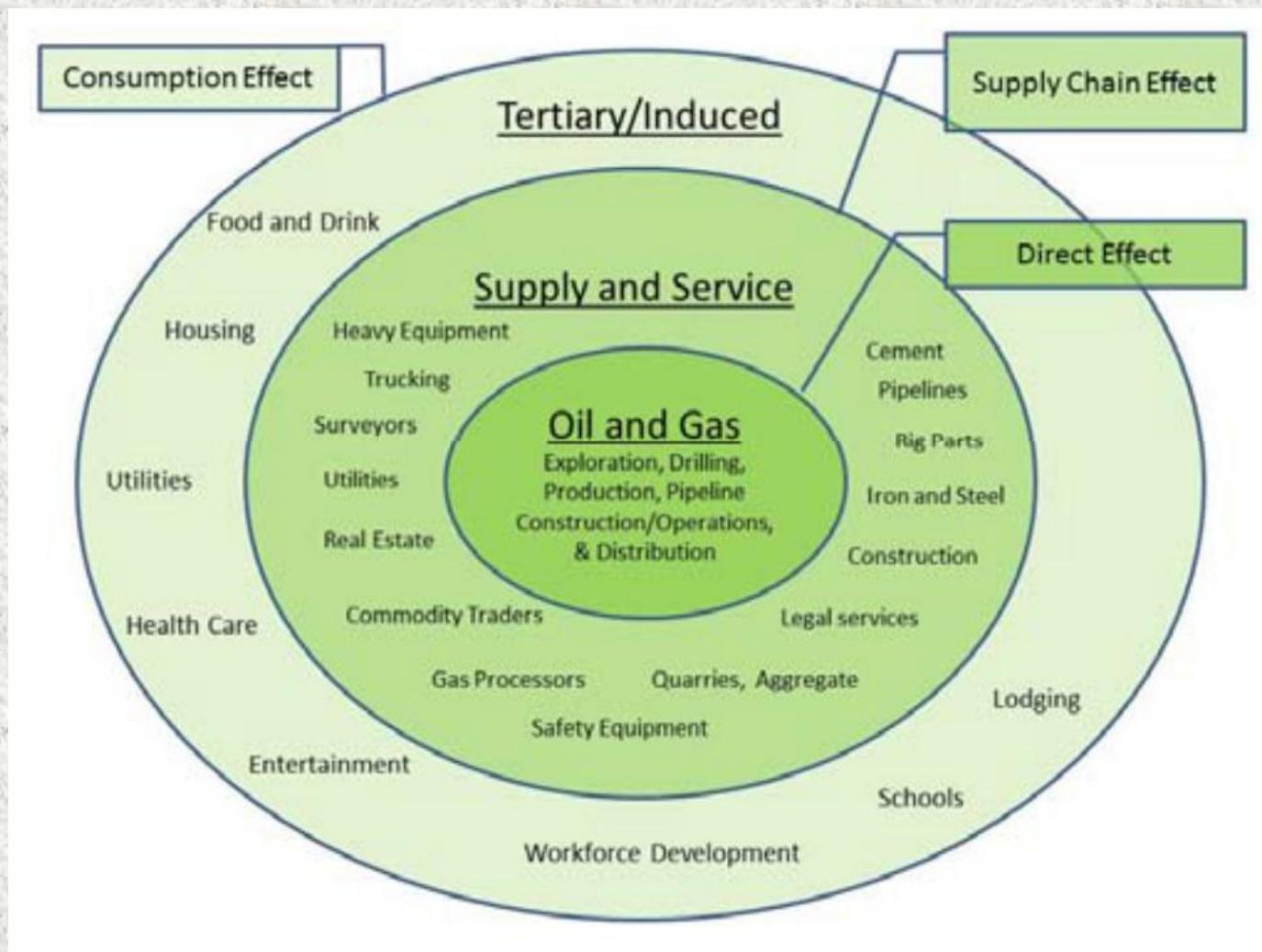
Well Casing & Cementing



Water Withdrawal and Impoundments



Economic Impacts



Shale Oil & Gas Potential

- **Direct Economic Lift to Landowners & Government**
 - \$Millions in Royalties from Extraction of Oil, Condensates, Natural Gas, Helium
 - \$Millions in Severance & Ad Valorem Taxes, Impact Fees
- **Direct & Indirect Jobs**
 - Skilled Tradesmen, Service & Support Contractors
 - Hundreds of Secondary Jobs in Motels, Restaurants, Repair Shops, Storage Yards, Equipment Suppliers
- **Cheaper, Cleaner-burning Fuel for Power Generation & Local Consumption**
 - 20+ Years of Sustained Supply of Local Natural Gas

