noble energy

STAKEHOLDER ENGAGEMENT

Our History

- **Noble Energy goes where others have not to create exceptional opportunities.**
- **Journey began in 1932 with the vision of Lloyd Noble, who recognized our business is about more than oil and natural gas exploration and production.**
- **Transformed into a leading global independent exploration and production company.**
  - NYSE: NBL
  - Global Employees: ~ 2,500
  - Market Capitalization: ~ $27 Billion
  - Projected 2014 Capital Program: $4.8 Billion

> *The land must continue to provide for our food, clothing and shelter, long after the oil is gone.*
>
> – Lloyd Noble

Core and New Ventures

5 core operating areas

1. Denver-Julesberg Basin
2. Marcellus Shale
3. Gulf of Mexico
4. West Africa
5. Eastern Mediterranean

4 new ventures

- a Nevada
- b Nicaragua
- c Falkland Islands
- d Sierra Leone

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Our Purpose: *Energizing the World, Bettering People's Lives®*

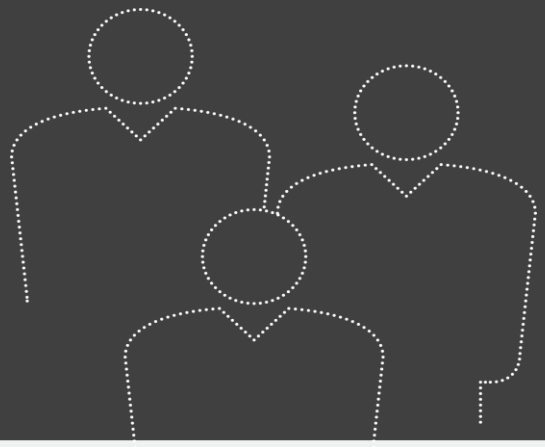
Energizing the World, Bettering People's Lives

- **Sustainable, extraordinary performance is about more than operational and financial results**
- **Committed to safely and responsibly delivering needed energy supplies, while improving lives in our communities**
- **Sustainability report demonstrates how we strive to deliver on our purpose**
  - We proactively engage with local communities
  - We utilize best management practices to reduce impact
  - We strive for no harm in all operations

We Build Partnerships

Building Partnerships

Long-term success depends on our ability to build trust with our stakeholders. We believe our core values provide the foundation upon which trust can be built.



Communities
Strive to be active members of our communities.

Contractors
Strive to provide contractors with same work environment our employees enjoy, and we hold them to the same standards.

Employees
Aim to create an inclusive, creative culture where our employees can make a difference.

Governments
Approach engagements with governments as opportunities to advocate positions that mutually benefit communities, industry and government.

Nongovernmental Organizations
Seek to build partnerships and working relationships with NGOs most relevant to our business.

Shareholders
Transparency is important.

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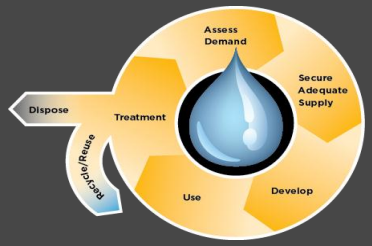
Marcellus Shale

1 Marcellus Shale

WATER MANAGEMENT



Our water management and reuse program eliminates the need for water disposal and reduces truck traffic.

ROAD SAFETY

We created a “Marcellus Road Use” plan to address traffic concerns and ensure policies and expectations are understood and followed by our employees and contractors.

LOCAL WORKFORCE

>85%

New hires from local communities

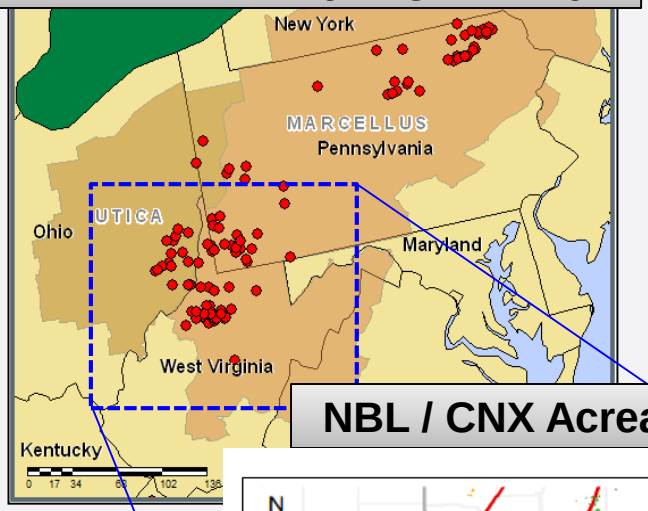
More than 85% of our new hires are from our surrounding communities. Their local knowledge is a great resource for our development of this core area.

Marcellus Shale Overview

Premier acreage position in the heart of the southwest fairway

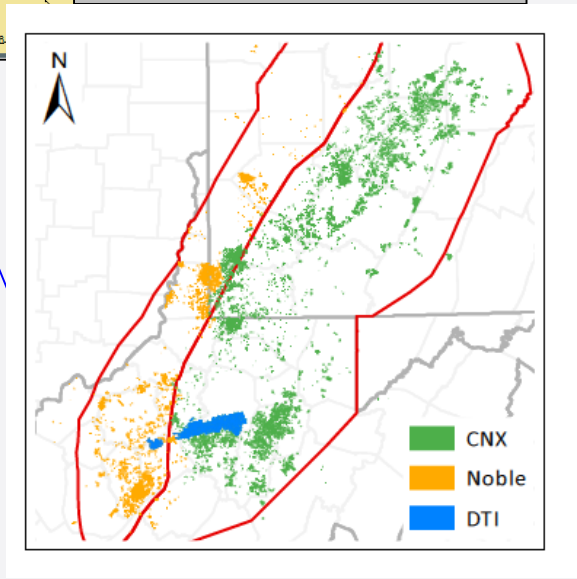
- **50% of 690,000 Gross Acres in the Southwest Fairway**
  - Primary focus of industry activity
- **87% HBP Acreage Position Provides Development Flexibility**
- **Currently Producing >200 MMcf/d, Up 65% Over Last Year**
- **West Virginia**
  - Marshall, Tyler, Doddridge, Ritchie, and Gilmer Counties
- **Pennsylvania**
  - Washington and Greene Counties

Current Industry Rig Activity



Baker Hughes
Gas Rig Counts

NBL / CNX Acreage



Living Our Purpose

Responsible development and community support

- **Efficient Development Planning**
- **Take Trucks Off the Road**
- **No Trucks During School Bus Hours**
- **Converting Rigs to LNG to Reduce Emissions and Costs**
- **Supporting Local Schools Through "Energizing Our Youth"**
- **Noble Neighbor Outreach Meetings**
- **Community Picnic and Rig Tours**
- **Bettering People's Lives:**
  - ~$1m to over 100 organizations in the Marcellus
  - Identify needs and address them
  - Partner in Education
  - Assist with Volunteer Fire Department needs
  - Workforce development programs
  - Junior Achievement "2014 Impact Company of the Year"

Understanding Stakeholder Concerns

- **Why does the public seem to have concerns with this industry?**

- **Basic relationship tools**
  - Be empathetic
  - Respect their concerns
  - Do not be dismissive
  - Listen
  - Find answers to the questions

- **Provide resources for information**

Available and Credible Resources

- **Who do people trust?**
  - **Survey in Energy Research and Social Science**
    - Most trusted sources of information
      - 1. University Professors
      - 2. Environmental Groups
      - 3. Newspapers…
    - Least Trusted
      - 7. Natural Gas Industry
      - 8. Gasland

Environmental Science
Processes & Impacts

ROYAL SOCIETY OF CHEMISTRY

PERSPECTIVE

View Article Online
View Journal

Cite this: DOI: 10.1039/c3em00510k

Practical measures for reducing the risk of environmental contamination in shale energy production†

Paul Ziemkiewicz,[a] John D. Quaranta[b] and Michael McCawley[c]

Gas recovery from shale formations has been made possible by advances in horizontal drilling and hydraulic fracturing technology. Rapid adoption of these methods has created a surge in natural gas production in the United States and increased public concern about its environmental and human health effects. We surveyed the environmental literature relevant to shale gas development and studied over fifteen well sites and impoundments in West Virginia to evaluate pollution caused by air emissions, light and noise during drilling. Our study also characterized liquid and solid waste streams generated by drilling and hydraulic fracturing and evaluated the integrity of impoundments used to store fluids produced by hydraulic

- **Have sources of information available**
  - **Have a toolkit of good information**
    - Paul Ziemkiewicz – WVU Professor
    - Shale Alliance for Energy Research – Pennsylvania Water Well Handbook
    - Trade Groups – Marcellus Shale Coalition (MSC), Pennsylvania Independent Oil and Gas Association (PIOGA), WV Oil and Natural Gas Association (WVONGA), WV Independent Oil and Gas Association (WVIOGA)

NBL

Steps Involved in Natural Gas and Natural Gas Liquids Production

- Leasing, Seismic, Surveying and Permitting
- Site Construction
- Drilling
- Well Completion and Hydraulic Fracturing
- Production and Reclamation

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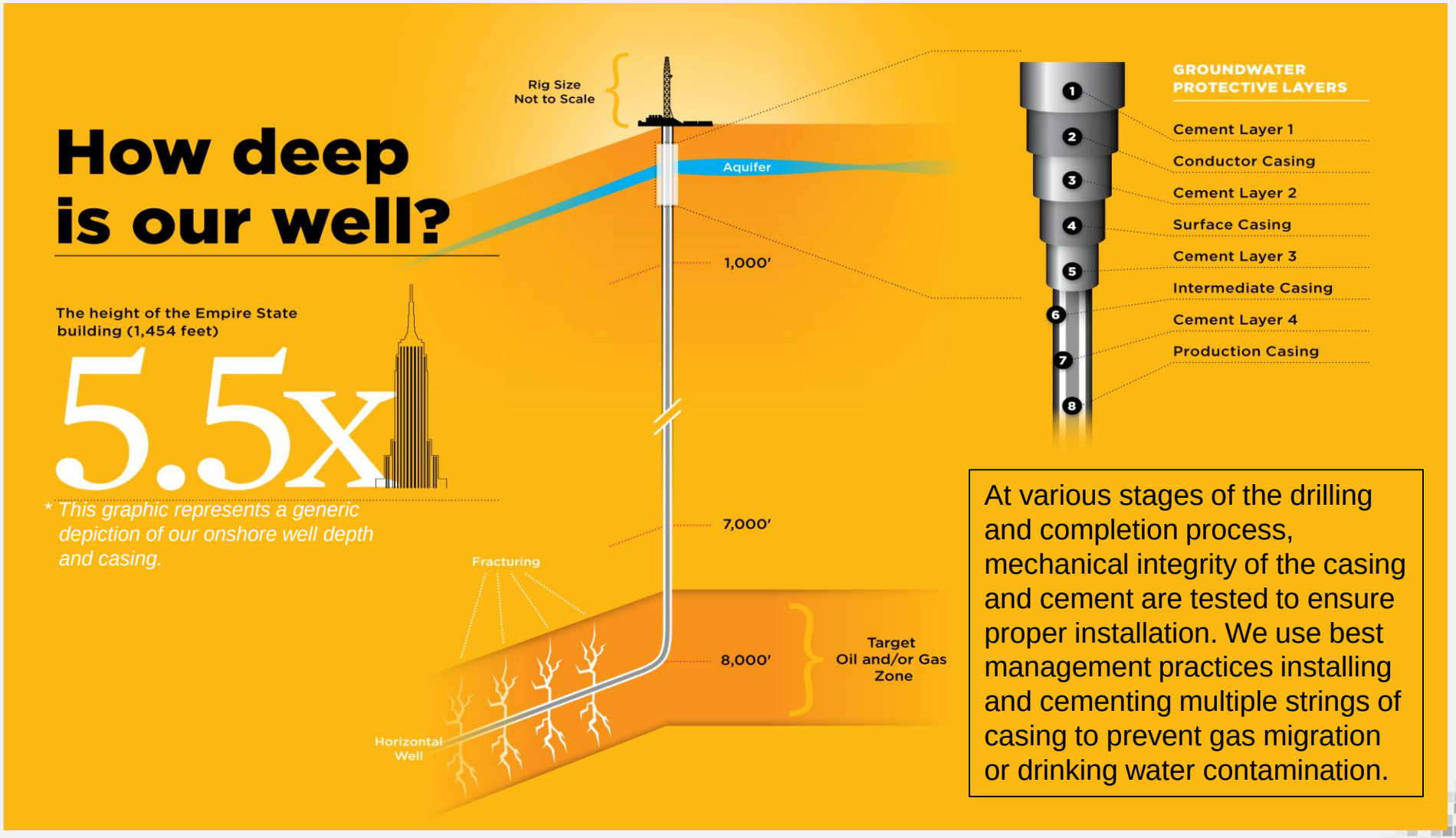
We Protect Water Aquifers

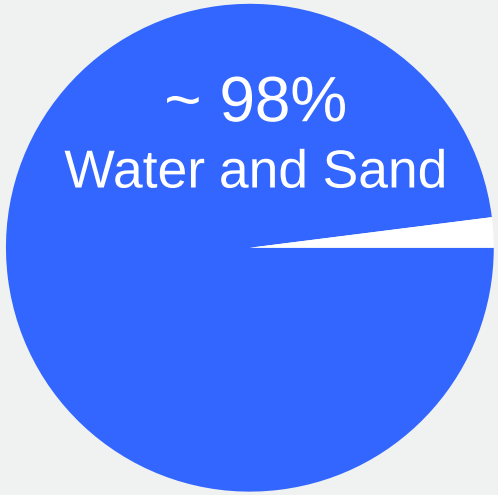


At various stages of the drilling and completion process, mechanical integrity of the casing and cement are tested to ensure proper installation. We use best management practices installing and cementing multiple strings of casing to prevent gas migration or drinking water contamination.

Hydraulic Fracturing Components

Noble Energy actively participates in a national publicly accessible web-based registry found at www.fracfocus.org to report additives used for hydraulic fracturing stimulation on a well-by-well basis.

Key Components



Source:
http://www.hydraulicfracturing.com/Fracturing-Ingredients/Pages/information.aspx

~ 2% Additives

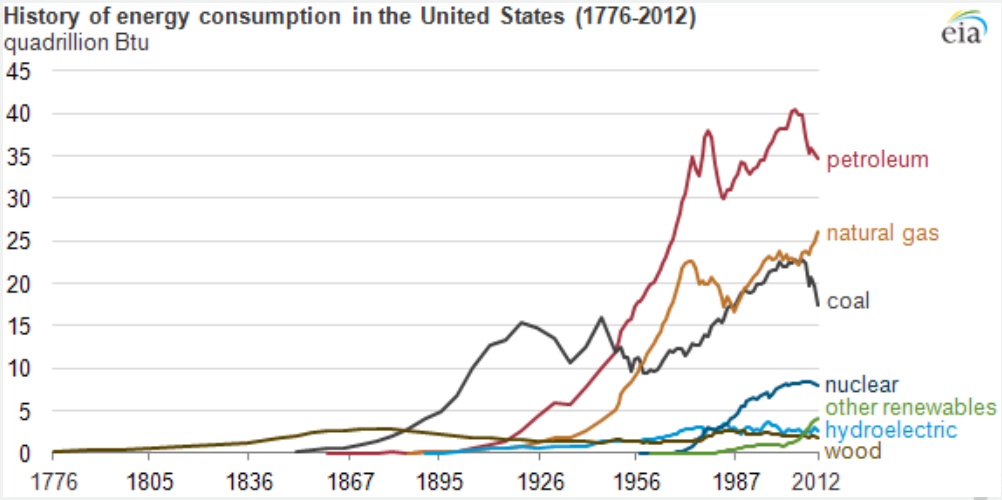
Component	Purpose	Everyday Purpose
Gelling Agent	Thickens Water	Ice Cream
Friction Reducer	Minimizes Friction	Cosmetics
Acid	Dissolves Minerals	Swimming Pool Cleaner
Antibacterial Agent	Eliminates Bacteria	Disinfectant
Corrosion Inhibitor	Prevents Corrosion	Pharmaceuticals
Crosslinker	Fluid Viscosity	Hand soap, cosmetics
pH Adjusting Agent	Effectiveness	Laundry Detergent Scale
Inhibitor	Prevent deposits	Household Cleaners
Surfactant	Increase Viscosity	Antiperspirant
Breaker	Delays Gel Breakdown	Hair Color
Iron Control	Prevents Precipitation	Food Additive
Clay Stabilizer	Prevents Swelling	Table Salt

Note: Not all chemicals are used in every well.

Unprecedented Opportunity

CNG NOW!

Fuel cost is ~40-50% less than gasoline and 30% less CO_2



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