

IOGCC Brownfields Workshop: November 16, 2010





● Outline of presentation

- ▶ What is a Brownfield?
- ▶ What are the benefits?
- ▶ Chesapeake examples:
 - Brownfields to natural gas sites
 - Traditional Brownfields projects

What is the meaning of Brownfield?

● For our discussion, the term describes three things:

▶ Brownfield site as defined by EPA

“Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. “

▶ State and local government Brownfield programs

- Assessment

- Technical assistance

- Cleanup oversight / Certificate of Completion

▶ Grants

- Annual EPA grant competition

- Administered by state and local governments and non profits

Brownfields have many faces

- Former service stations
- Former aviation sites
- Oil and gas sites
- Salvage yards
- Illicit dump sites
- Landfills
- Heavy industrial sites
- Rail yards
- Abandoned/occupied buildings



Brownfields have many faces

Illicit dump sites



Brownfields have many faces

Dry cleaners



Brownfields have many faces

Scrap facilities



Brownfields have many faces

Oil & gas sites



Brownfields have many faces

Vacant
commercial



Brownfields have many faces

Vacant or mothballed
office buildings



● Liability protection

- ▶ Can support energy development projects and traditional real estate development projects
- ▶ Can be good tool for owner/operator to address potential environmental liability prior to divestiture
- ▶ Particularly helpful if properties were acquired without All Appropriate Inquiry / bona fide prospective purchaser protection

● Landowners, community and environment benefit

● Partnership opportunities with state and local government

- ▶ Funding and technical support at state and local levels can compliment each other
- ▶ Local programs not available everywhere / states can fill in gap

Industry Case Study: Chesapeake's Brownfields Efforts



Traditional Brownfield projects

● 7th Street property (TX)

- ▶ 40-acre tract with checkered past
Approx 3-5 acres used for gas production
- ▶ Remainder will likely be commercial development

● Mercado property (TX)

- ▶ 10-acre former landfill
- ▶ Approx 3 acres used for production and compression
- ▶ Approx 6-7 acres proposed for divestiture
- ▶ Interest from developer as possible hotel site



Traditional Brownfield projects

● Arc Park field office (TX)

- ▶ Blighted regional ballpark turned into new office

● Former E&P yard (OK)

- ▶ Former yard / compressor site
- ▶ CHK acquired through donation, but never operated on location

● Former airport (PA)

- ▶ 50 acre site to be used as new combined service Chesapeake field office
- ▶ Issues from former AVGAS USTs
- ▶ Currently evaluating need for further assessment



● Goals of EPA's Brownfields program

- ▶ Clean up and reinvest in blighted properties
- ▶ Encourage / leverage private investment
- ▶ Put Brownfields into productive use
- ▶ Create jobs and improve local economy

● In North Texas, Chesapeake has

- ▶ Invested more than \$200 million through acquisition and cleanup at over 40 Brownfields
- ▶ Turned 17 Brownfields into sites that produce a clean burning energy source, generate millions of dollars in local revenue, and create local jobs

Making a Positive Impact



- We have reversed the relationship between oil/gas industry and Brownfields
- Chesapeake is making a positive impact to Brownfields before drilling ever starts
 - ▶ We have conducted a significant amount of demo and surface cleanup
 - ▶ Some sites will be used for gas production
 - ▶ Some will be returned to real estate market in a more desirable state
 - ▶ Purchased two City of Fort Worth brownfield assessment sites
 - 5 producing wells
 - 7 proposed wells

From Brownfields to Natural Gas sites

To build one of these...



Sometimes we have to purchase these...

From Brownfields to Natural Gas sites



From Brownfields to Natural Gas sites



From Brownfields to Natural Gas sites



From Brownfields to Natural Gas sites



From Brownfields to Natural Gas sites



From Brownfields to Natural Gas sites



Putting Brownfields to Productive Use

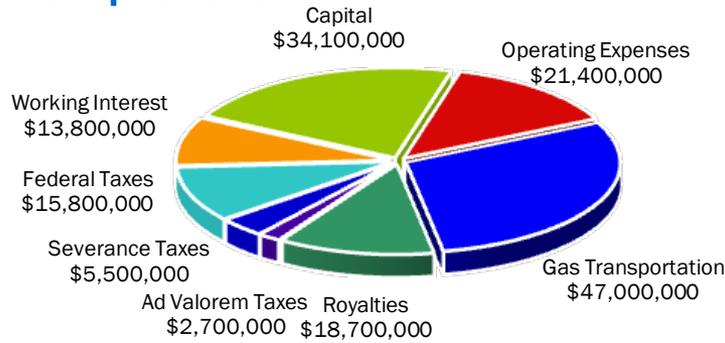
- Chesapeake has purchased and cleaned up over 40 blighted properties totaling 630 acres in North Texas
- Most sites will be used for natural gas wells
- One site also serves as a Chesapeake regional office
- Some are no longer needed and will be sold as clean sites
- 17 Brownfields currently include pads with producing wells

Overall impacts of Barnett Shale in Texas

- \$715.5 million in direct and indirect tax revenue
- \$10.1 billion in increased annual economic activity
- 99,726 new jobs in Texas

With conservative estimates, one 12-well padsite can produce

- ▶ \$159 million in total revenue
- ▶ \$18.7 million in royalties to residents
- ▶ \$8.2 million to state and local taxing jurisdictions
- ▶ \$21.4 million+ to local workforce and businesses



Putting Brownfields to Productive Use



- Chesapeake has invested more than **\$150 million** in **17 North Texas Brownfields** that are currently producing natural gas
- If fully developed, these **17 Brownfields** could produce:
 - ▶ \$2.703 billion in total revenue
 - ▶ \$317.9 million in royalties to residents
 - ▶ \$139.4 million to state and local taxing jurisdictions
 - ▶ \$363.8 million+ to local workforce and businesses
- Investment is ongoing at the remaining **23 Brownfields** / many will also contribute to these economic impacts

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