Marcellus Shale Overview

March 14, 2012

CPES Conference

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U.S. Shale
"Changing the World"

U.S. Shale

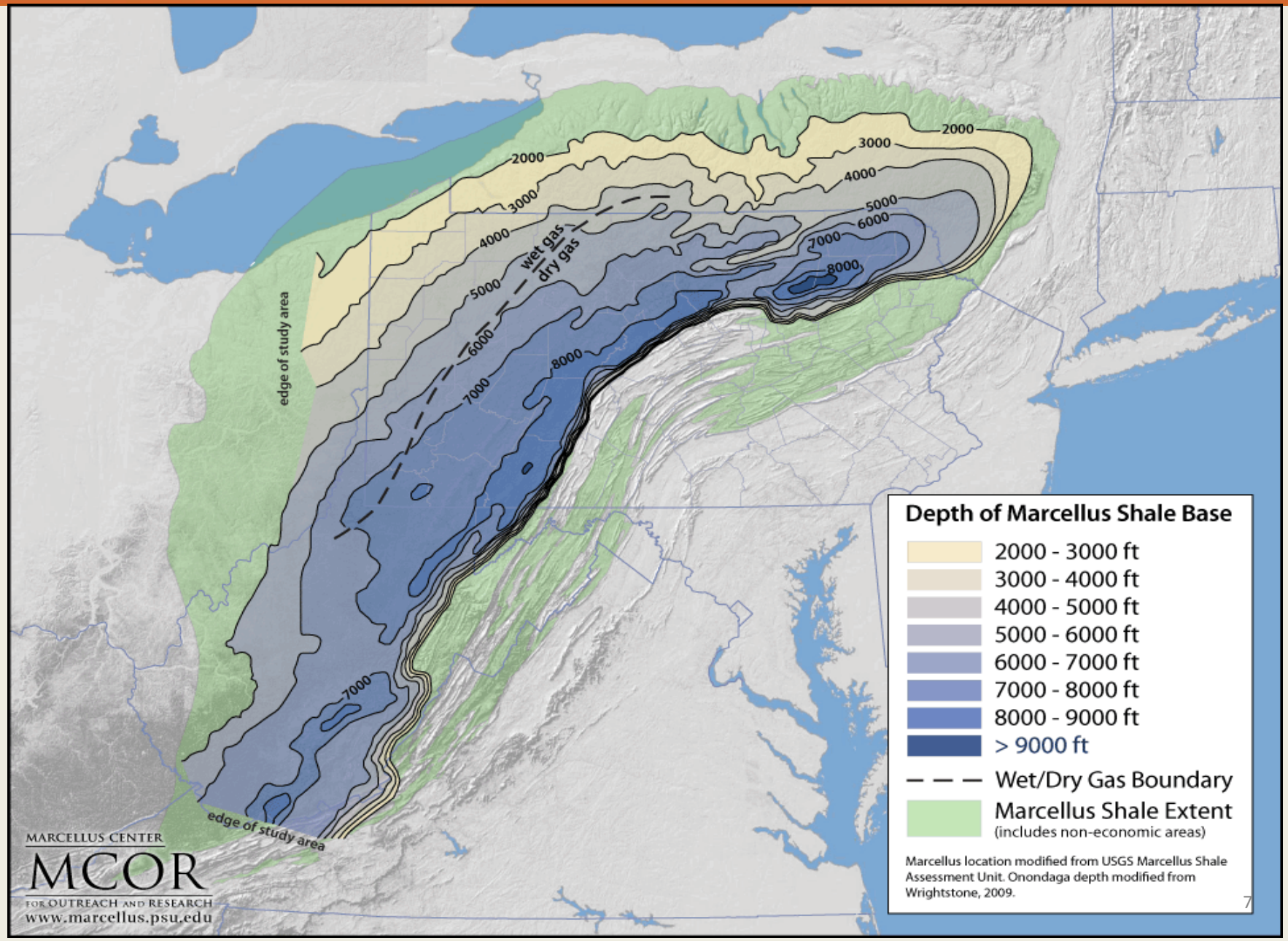
Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

Marcellus Shale

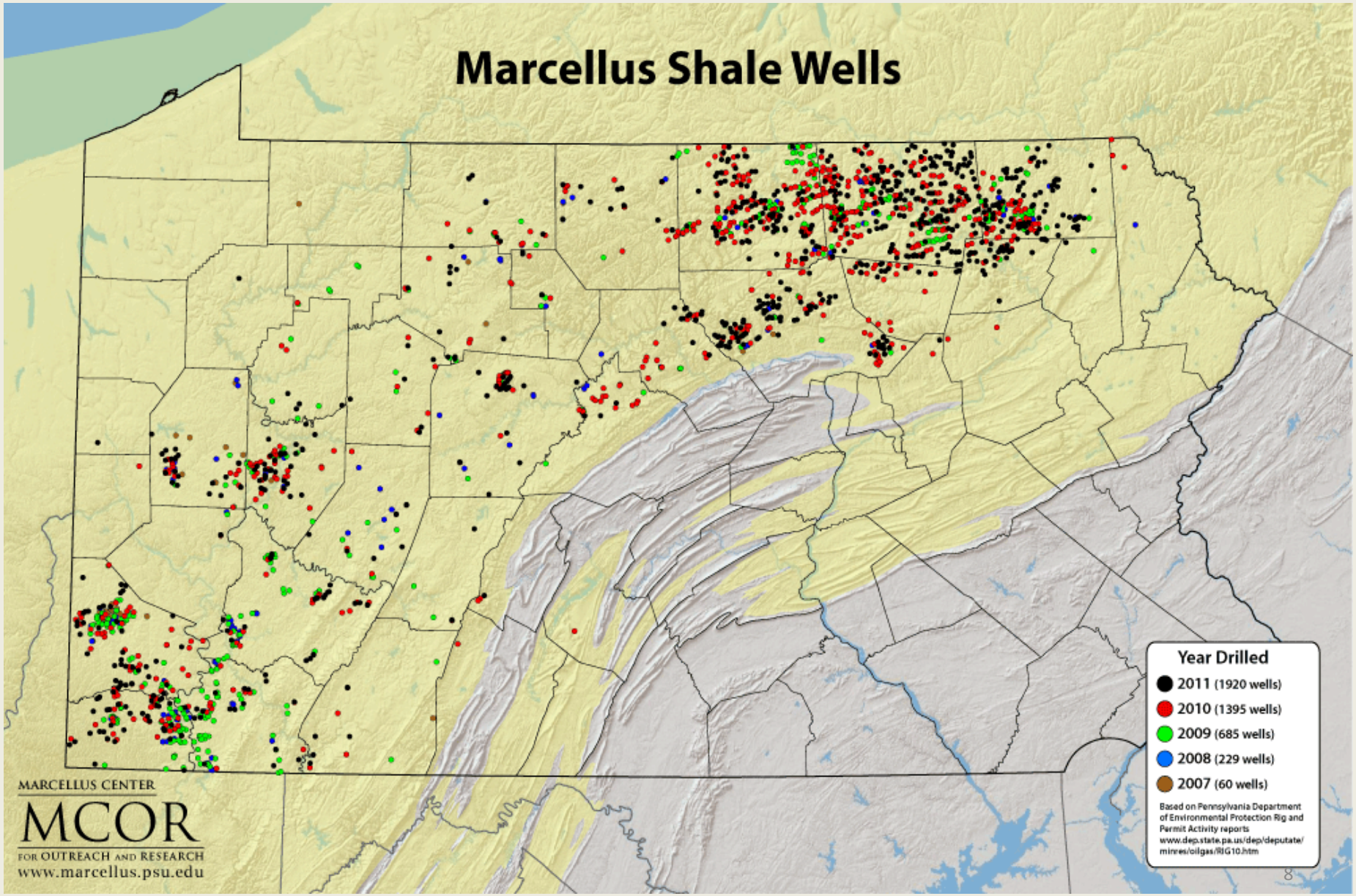
- Named for a distinctive outcrop near the village of Marcellus

- Known formally as the “Marcellus Formation”
- Is a **Middle Devonion**-age black, low density, carbonaceous (organic rich) shale.
- Deposition occurred about 390 million years ago.

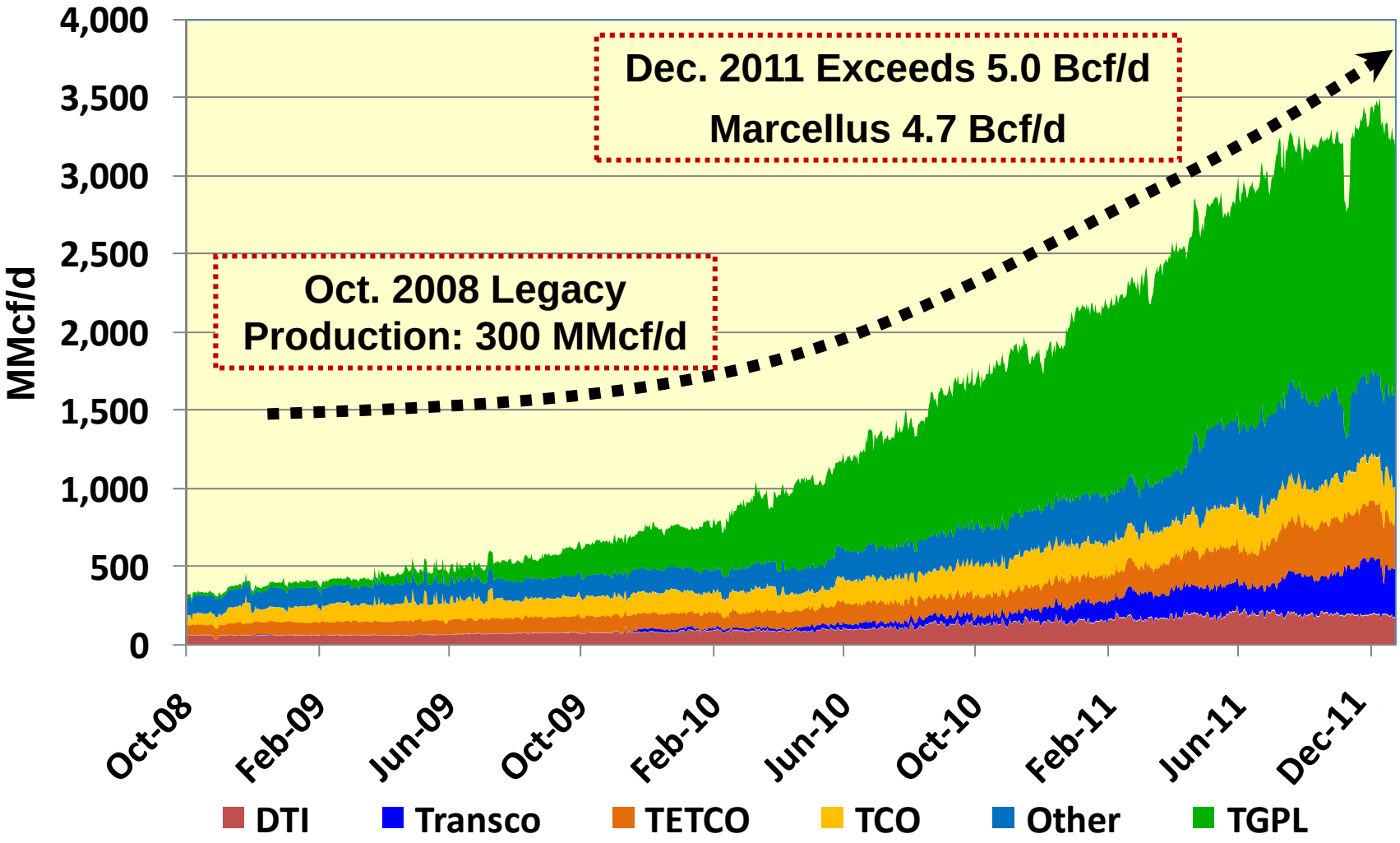
Depth of Marcellus Shale Base



Marcellus Shale Wells Year Drilled



Marcellus PA Production Growth



How Big Is It?

- 500-1,000 trillion cubic feet of Gas in Place
- 100-150 trillion cubic feet recoverable reserves under existing technology
- Largest conventional gas field in US – Hugoton 81 TCF
- 450,000 wells drilled in Appalachian basin over 150 years and have produced 47 TCF

Economic Growth

PA Dept of Labor & Industry as of August 2011

- 218,200 employees in Marcellus and related industries
- 72,000 hires since 4th Quarter 2009
- 12,700 new hires in 1st Quarter 2011
- 7 in 10 hires are from Pennsylvania

Penn State Summer 2011 Study

	2010	2011	2020
Economic Value Added	$11.2 billion	$12.8 billion	$20.2 billion
State/Local Taxes	$1.09 billion	$1.23 billion	$2 billion
Cumulative Employment	139,889	156,695	256,420
Wells Spudded	1,405	2,300	2,497
Output (bcfe/day)	1.3	3.5	17.5

General Estimates for Cabot

- Cabot generally states that we support more than 200 employees in Susquehanna County and the majority are (70%+) are from the local area.

- Cabot has invested close to $1.5 billion into Susquehanna County and the local community.

Cabot Marcellus Operations

Cabot's Snapshot

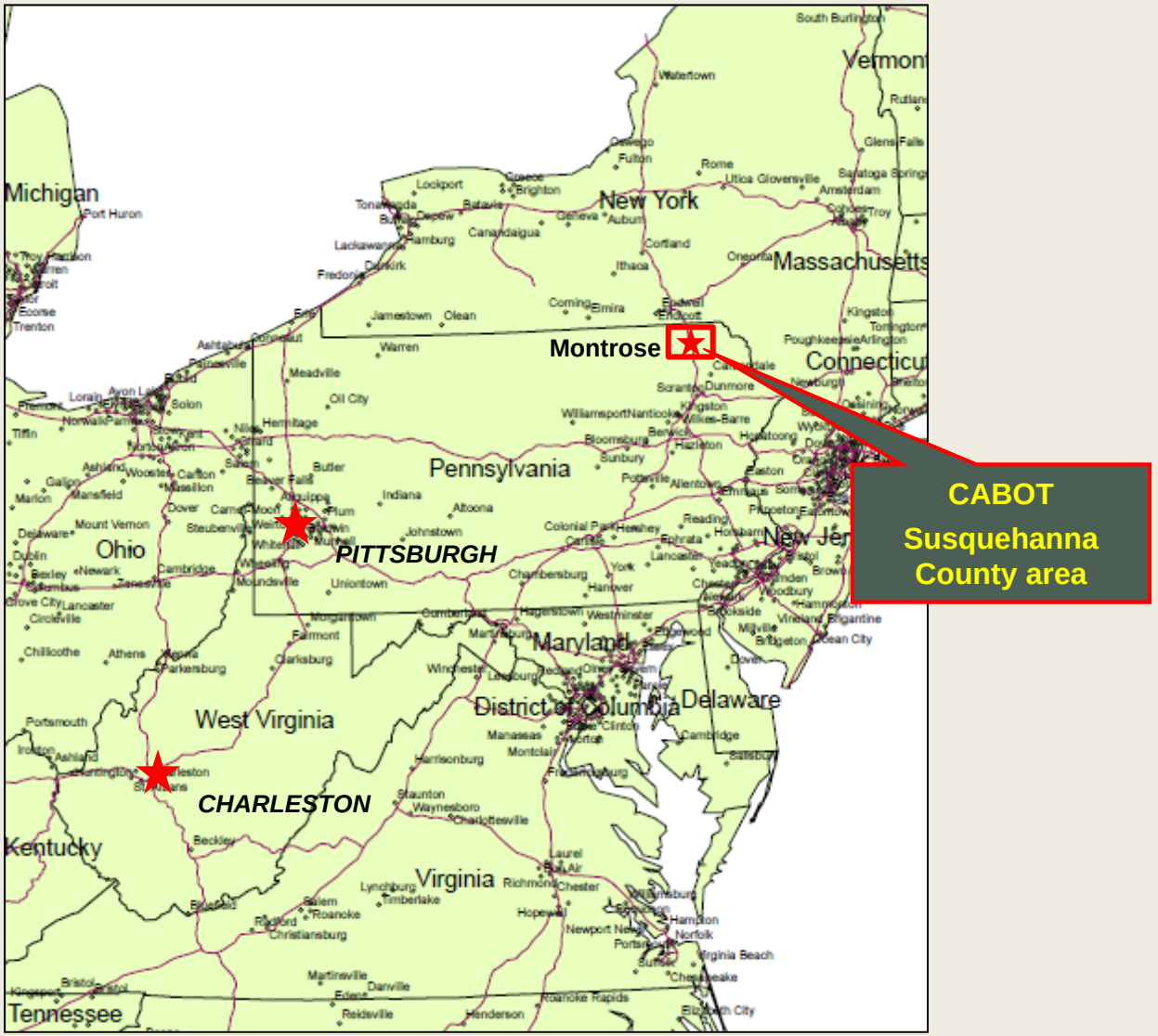
NYSE: COG

Shares Outstanding	• **208 Million**
Market Capitalization	• **$7.5 Billion**
Debt outstanding	• **$1.0 Billion**
Enterprise Value	• **$8.5 Billion**

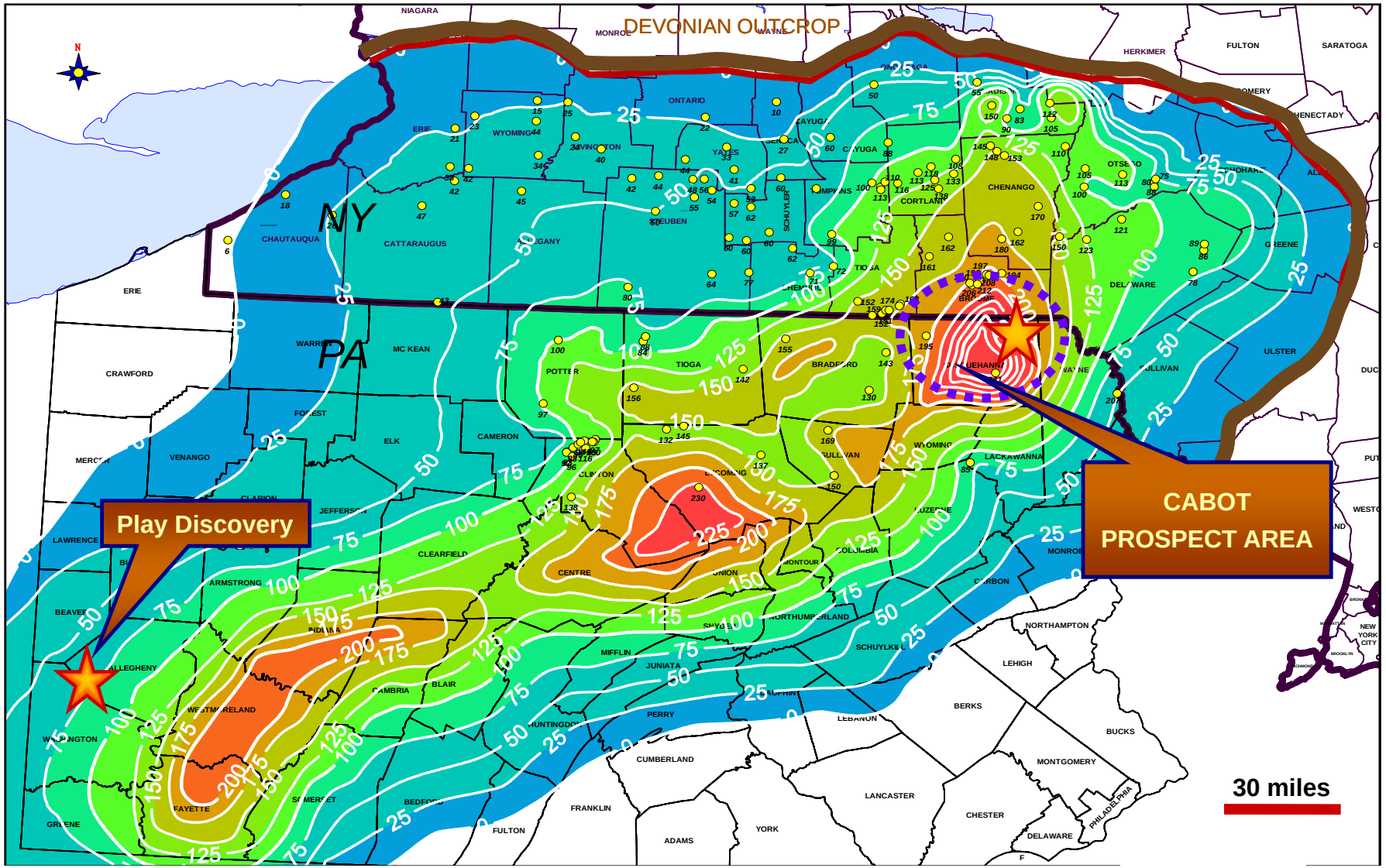
3 Plays

Marcellus – Dry Gas	**5 Rigs**
Marmaton – Oil	**1 Rig**
Eagle Ford – Oil	**1 Rig**

North Region – Marcellus Area Location Map



Marcellus Thickness Map – 2005

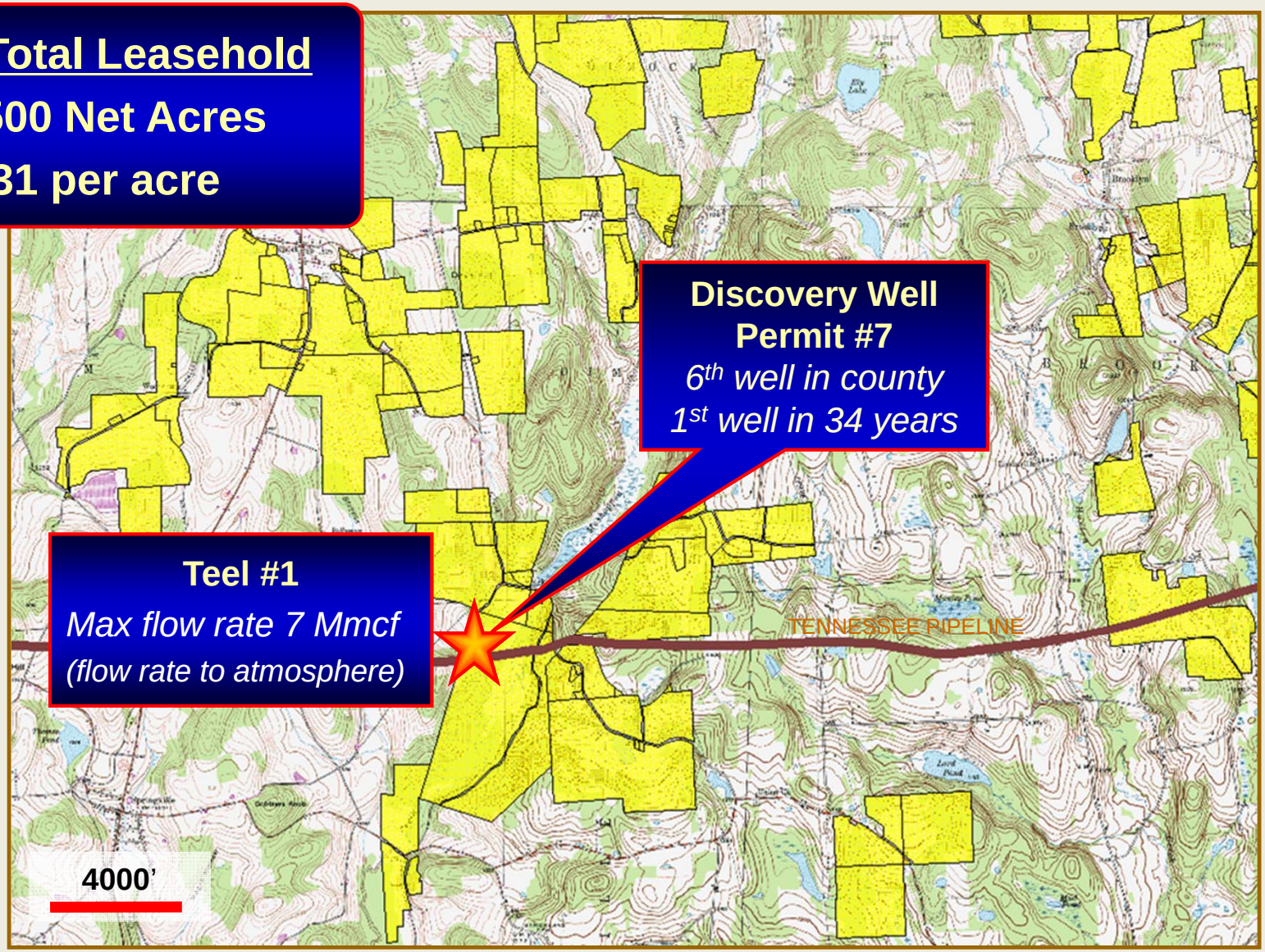


Susquehanna Prospect – 2006

2006 Total Leasehold

19,500 Net Acres

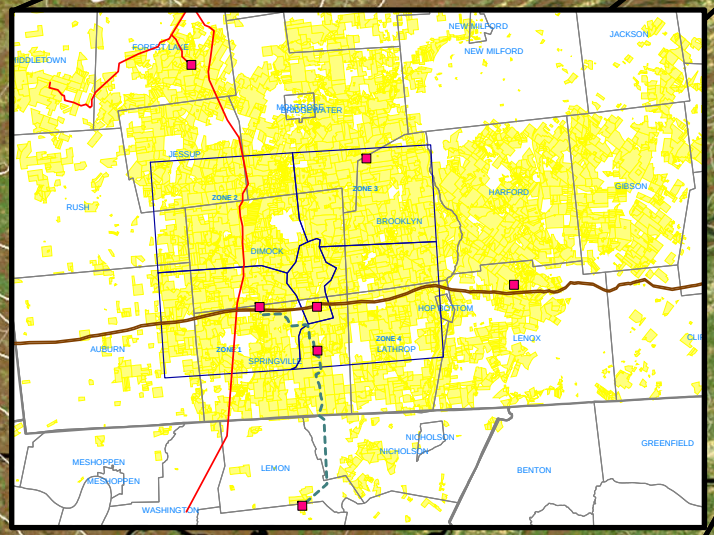
$31 per acre



Marcellus Summary

Marcellus Shale
Gross Isopach
CI: 50 ft

~180,000 acres



Field Production: 600 MMCF/D

Wells Producing: 118 H, 37V

WOPL: 9 wells (120 Stages)

Completing: 7 wells (119 Stages)

WOC: 22 wells (278 Stages)

Horizontal Rigs: 5

Best Practices

Best Practices

Drilling =	Cabot utilizes closed loop drilling system – No open pits 100% of drilling location is cover by $20,000 tarps.
Flowback =	15% of water returned to surface to Frac tanks. Flowback water hauled to recycle center – pumped into mobile treatment facility and returned to clean Frac tank for next job.
Disposal =	None – 100% of Flowback water is recycled.
Additives =	Cabot has always supported full disclosure of additives

Infrastructure and Market

Total Capacity Summary

Up to 650,000 Dth/d to Transco

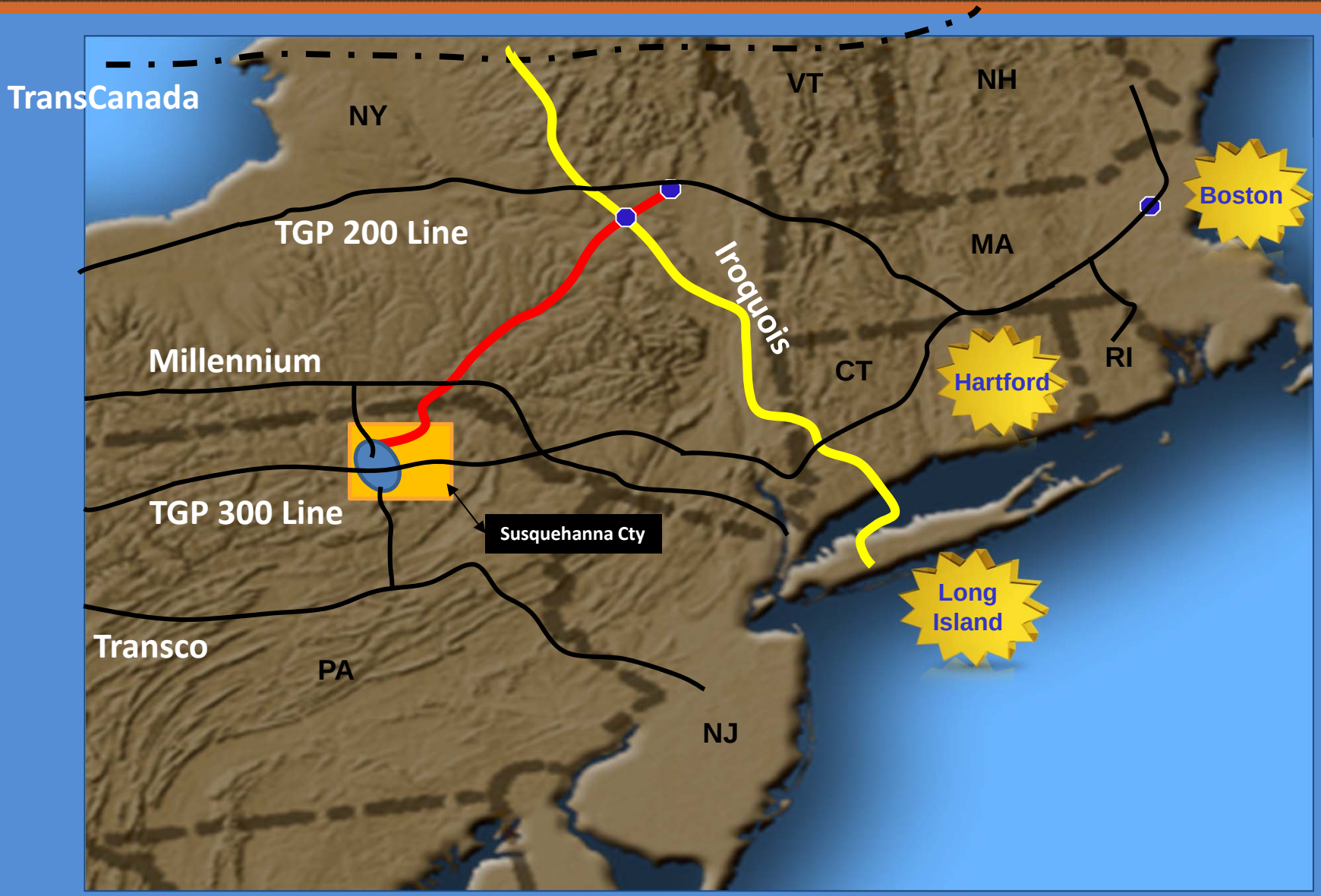
Up to 250,000 Dth/d to Millennium

Up to 600,000 Dth/d to TGP 300 Line

Up to 500,000 Dth/d to Iroquois/TGP 200 Line (March 2015)

2 Bcf/d of Market Opportunity on Five Interstate Pipelines!

Markets


TransCanada
NY
VT
NH
Boston
TGP 200 Line
Iroquois
MA
Millennium
CT
Hartford
RI
TGP 300 Line
Susquehanna Cty
Long Island
Transco
PA
NJ

Thank You!