

A Current Summary of the Utica Shale

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About Warlick Energy

An oil & gas intelligence firm based in Houston with special experience in unconventional resources serving the E&P, oilfield services & manufacturing and financial sectors since '76

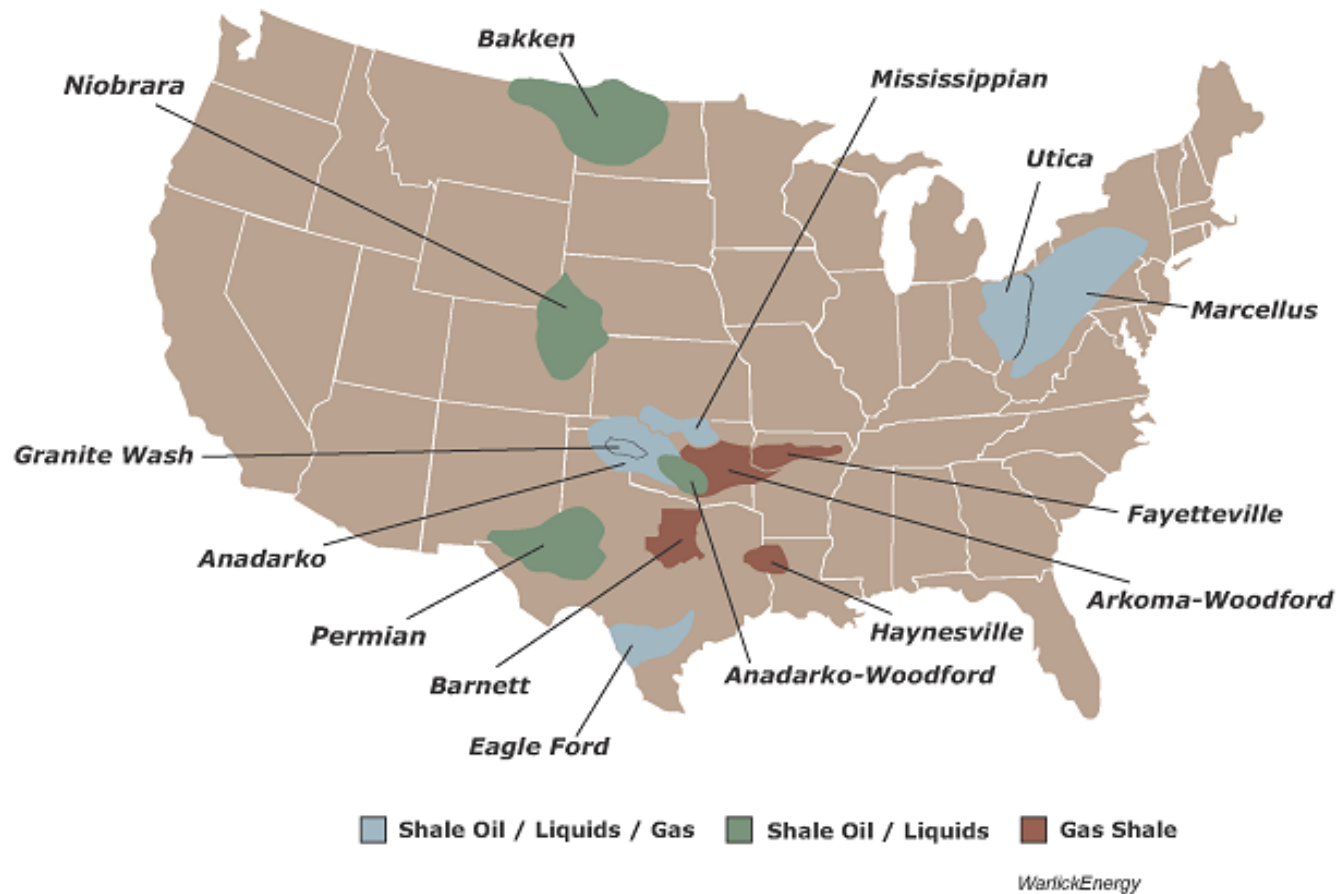
Two practice areas:

1 - Market Research: Execute one-off market studies involving new product potential, technology reviews, competitor analyses, market audit, acquisition search and evaluation, perception of image and performance, market forecasts, litigation support.

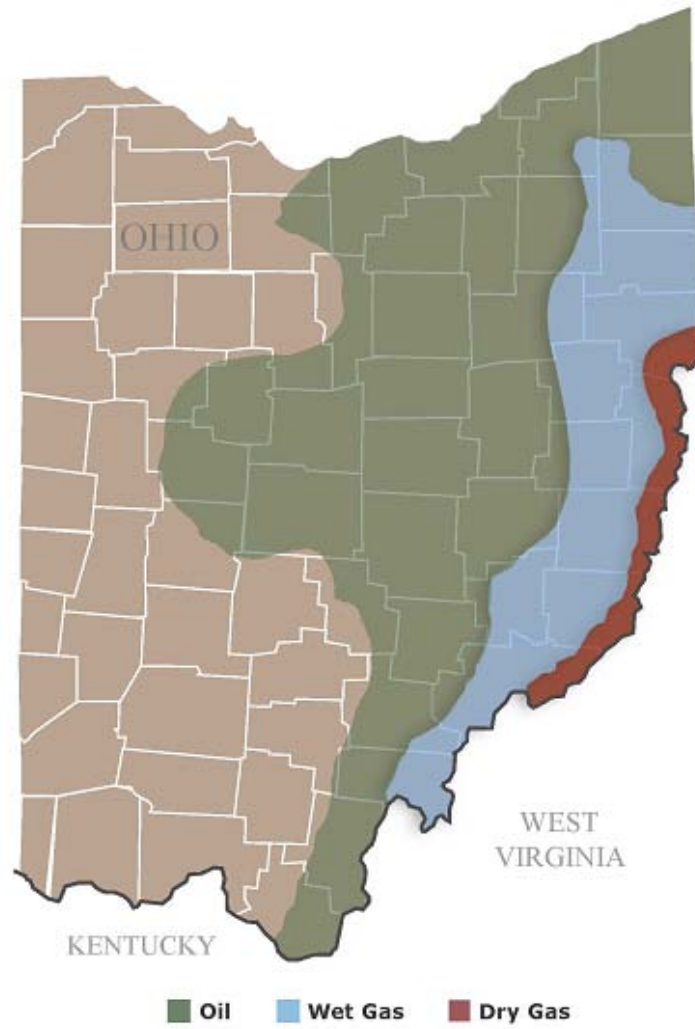
2 – Proprietary Unconventional Resource Reports -- Warlick publishes a series of proprietary reports addressing unconventional oil & gas in North America.

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The Utica is among thirteen major US shale plays



The Utica Shale in Ohio



Characterizing the Utica Shale

- **An Ordovician-age organic, rich black shale. It has interbedded limestone with typical thicknesses of ~ 150-200 ft. Depths range from 7,500 – 9,250 ft with HZ target zones in the Point Pleasant**
- **In eastern Ohio the Utica lies below the Marcellus, which may be encountered at depths less than 6,000 ft**
- **Moving from west to the east in Ohio towards Pennsylvania, the Utica interval will thicken and go deeper**

Characterizing the Utica Shale

- **The overall makeup and mineralogy in the Utica is said by experts to be quite similar to the Eagle Ford Shale with high carbonate/low clay content – which is quite amenable to hydraulic fracturing**
- **It has sizable OOIP potential with 150-300 ft total thickness, TOC range 2% to 4% and reported average porosity ranging from 6% to 8%**
- **The USGS estimates Utica may contain up to 61 TCF natural gas, 16 million bbl of NGLs and 1.4 billion bbl of crude oil – but there are other, variant estimates as well**
- **More definition is needed from many more Utica completions in order to arrive at closer estimates.**

Characterizing the Utica Shale

- **As of mid-February a total of 518 drilling permits issued prospective to the Utica Shale**
- **Top four operators and their issued drilling permits:**
Chesapeake – 329 Gulfport – 30 CONSOL/CNX – 21 Hess - 18
- **At this point, 236 Utica Shale wells have been drilled with 65 in production**
- **Ohio has been a long-standing producer of natural gas—but the 65 producing Utica Shale wells (gas and liquids producers) are estimated to be producing ~ 57% of the production of 64,000 existing vertical gas wells in the state**
- **At present there are 28 rigs drilling**

Busy Players in the Utica -- Chesapeake Energy

- **CHK began drilling here in 2010 and has been the leader ever since**
- **Currently has approximately 1 million net acres in the Utica**
- **It helped that Total invested \$2.3 billion in Chesapeake and EnerVest Utica holdings (EnerVest received \$290 million)**
- **By the end of 2012, drilling carried from total was \$1.15 billion, to be used through 2014**
- **Since 2010 Chesapeake has drilled 184 wells in the Utica**
- **Producing = 45, WOPL = 47 and 92 in varied states of completion**
- **Midstream/pipeline hookups are constrained, should improve greatly this year**

Busy Players in the Utica -- Chesapeake Energy

- **Chesapeake still showing dedication to the Utica, expecting their production growth to ramp up with completion of two sizable gas processing plants**
- **EUR projections in wet gas window are in a wide range, 5-10 BCFE**
- **Recent completion in this area had peak rate of 2,025 BOED**
- **Their 2013 drilling budget allocates 11% to the Utica (~\$700 million) behind the Eagle Ford budget with 35% and the Anadarko basin at 28%**
- **Far and beyond the Utica's biggest driller with 14 rigs running**

Busy Players in the Utica – Gulfport Energy

- Presently has 128,000 net acres; accumulated over the years with early-2011 additions of 37,000 net acres (\$300 million) and 22,000 net acres (\$220 million)
- Overall, Gulfport has 856 gross locations, largely in Harrison and Belmont counties
- Gulfport indicates their first 10 operated wells tested on average at 3,630 BOEPD – 1,166 Bbl of NGLs, 10 MMCFD of natural gas and 798 BD of condensate
- Best of these 10 Wells tested at 7.5 MBOEPD including 3,207 BD liquids and 25.7 MMCFD
- A distant #2 behind Chesapeake with 3 rigs running this year compared to 2 rigs in 2012
- Their Utica 2013 capex = \$382 to \$426 million with plans to drill 50 gross wells

Busy Players in the Utica – CONSOL Energy (CNX)

- **CONSOL kicked off their Utica shale activity via the joint venture with Hess in late 2011**
- **This was a \$594 million JV which involved 200,000 acres in a 50/50 deal –slightly more than half the leasehold came from CONSOL’s earlier acquisition of Dominion assets**
- **In the CONSOL-operated JV segment they drilled eight wells in 2012, completing four with horizontal laterals ranging from 2,785 to 7,568 feet with up to 16 frac stages**
- **They plan a two-rig, 11-well program for 2013**
- **In the Hess-operated segment of the JV, Hess is running one rig in Harrison County with plans to drill up to 16 wells in 2013.**

Busy Players in the Utica – Hess

- **In late 2011 Hess acquired Marquette Exploration plus a number of other leases in the Utica, a deal for \$750 million for 85,000 net acres**
- **Their properties are in Belmont, Harrison and Jefferson counties. Noted previously, Hess spent \$594 million in their CONSOL JV soon afterwards so total investment = \$1.3 billion**
- **In overall Utica operations Hess spent ~ \$300 million in Utica appraisal drilling during 2012 and plans to spend \$400 million this year**

Some Utica Independents – Antero Resources

- **Antero presently has 81,000 net acres, largely in Noble County (southern part of the Utica)**
- **They indicate about 90% of the acreage is rich-gas**
- **Three wells completed with tentative plans to spend ~ \$150 million in the Utica this year, anticipating new gas processing to free up production**
- **Presently running two drilling rigs**

Some Utica Independents – Halcon Resources

- **Halcon has completed their first two wells with production coming spring 2013**
- **They have 130,000 net acres, 100% operated**
- **Drilling 10 wells to delineate acreage**
- **Drilling and completion budget ~ \$200 million with 2-3 operated rigs by end of year**

. . . and in the Wings

- **Anadarko Petroleum**
 - **Records indicate they have been issued 12 drilling permits**
 - **Approximately 7-8 operating wells**
 - **Reportedly will conclude their evaluation of Utica properties this spring.**

- **Carrizo Oil & Gas – Issued two permits, also in Trumbull County, OH – also has permits to drill the Utica in Mercer County, PA**

- **Chevron – Issued one permit to drill the Utica in Mercer County, PA**

- **ExxonMobil – Currently has around 52,000 acres in Belmont and Monroe Counties, OH and at present has 4 permits to drill**

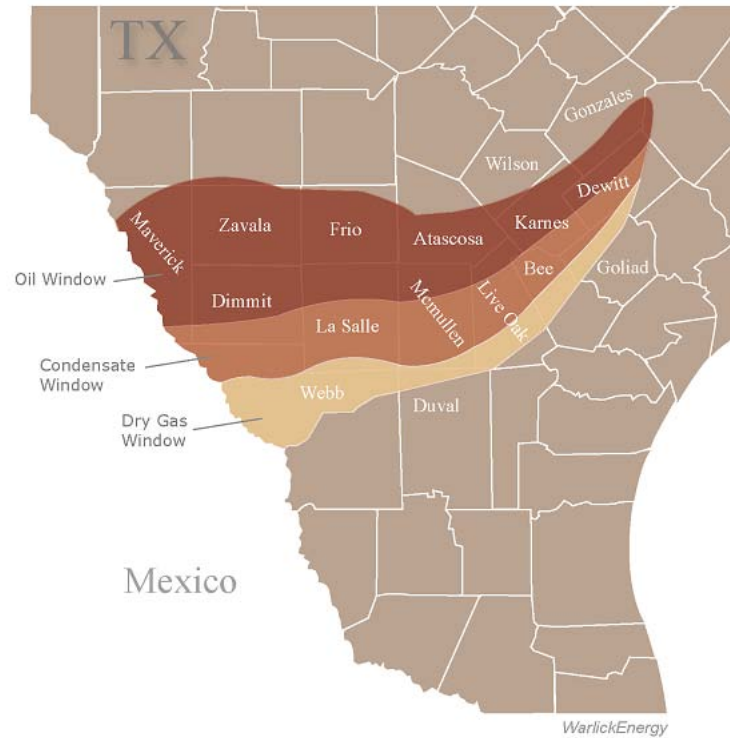
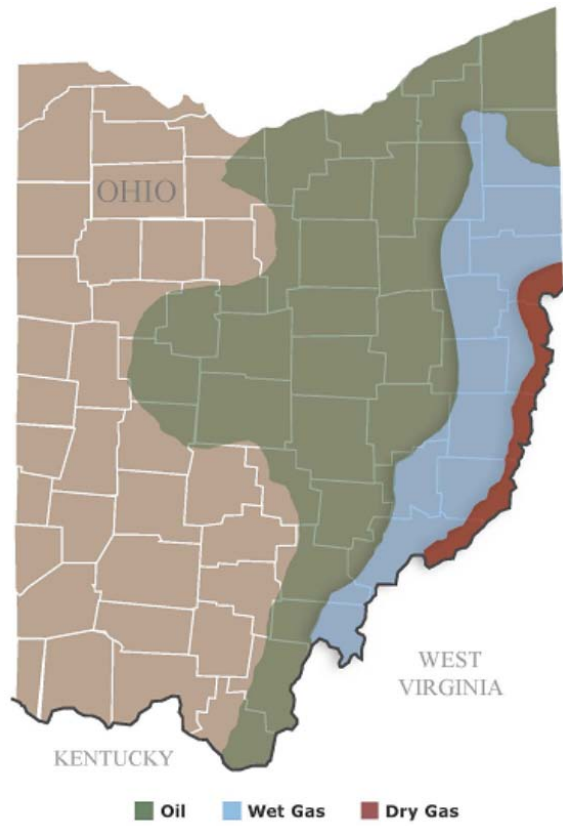
. . . but some are selling their Utica holdings

- **Devon Energy**
 - **Announced they are marketing certain properties through Scotia Bank**
 - **Approximately 195,000 net acres, believe most in Guernsey County**
 - **Acreage is largely HBP**
 - **Devon has been issued 12 applications to drill in the area**

- **EnerVest**
 - **Selling 103,800 acres in four Eastern Ohio counties**
 - **Presently part of more than 330,000 acres being marketed by EnerVest**
 - **Ohio records indicate 16 drilling permits issued to Enervest**

Comparing the Utica to the Eagle Ford

The Utica-Point Pleasant core area is ~ 11 million acres, the Eagle Ford ~ 12.8 million acres



Comparing the Utica to the Eagle Ford

Comparisons	Utica Shale	Eagle Ford Shale
Initial Shale Development	Late 2010	Late 2008 - early 2009
Active Operators	24 companies	At least 52 companies
Top Five Operators	Chesapeake, Gulfport, CONSOL, Hess, Halcon	Anadarko, Chesapeake, EOG, Conoco Phillips, Marathon,
Drilling permits issued	First 2 years = 518	First 2 years = 120 Year #3 = 1,010 Year #4 = 2,826 Year #5 = 4,143
D&C Cost	\$7 - \$9.5 MM	\$5.8 - \$6.5 MM
EUR - BCFE	5 (CHK reported min.)	2 - 3
Target Depths	7,000 - 8,700	8,000 - 9,500
Estimated Shale Wells Drilled 2013	95 - 125	5,200 - 5,800

Final Comments

- **The Utica does have attractive potential**
- **Appears to be a good, liquids-rich opportunity**
- **Development & takeaway has been slowed by lack of midstream/pipeline infrastructure**
- **But new capacity is on the way, launching this year and extending into 2014**
- **At this point the Utica is a Chesapeake story, and they are committed with \$700 million and 14 rigs this year. . . Total's drilling carry helps**
- **Hesitation and seemingly-slow appraisal by several of the bigs a concern, the planned departure by Devon as well**
- **Summary: More confirmation of potential is needed, should have a better idea of Utica's path forward late 2013-early 2014.**

End of Presentation

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