

Tax ID =9-19-62
215ac
Athens Township, Bradford County, PA

Geologic Summary

Zaengle Geoscience LLC

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DISCLAIMER

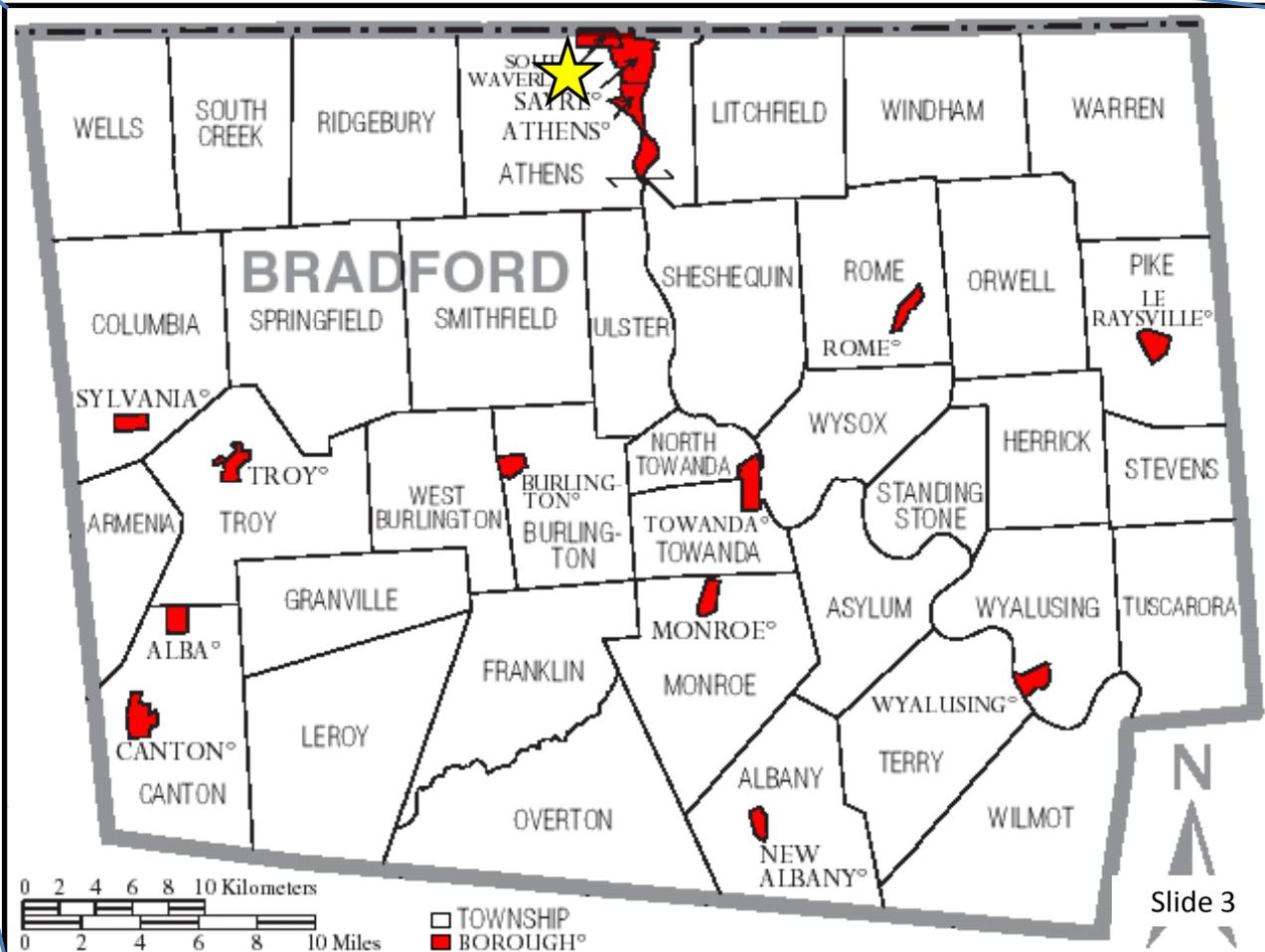
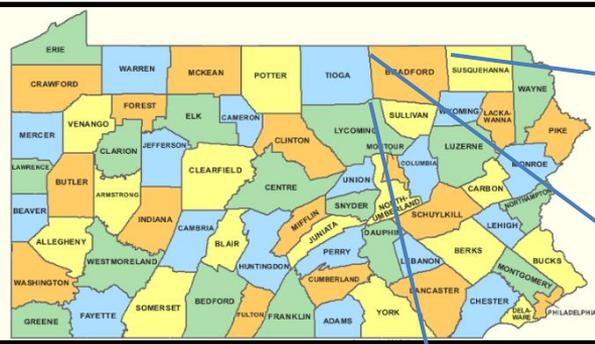
Information on the subject property set forth herein was originally compiled by Zaengle Geoscience LLC ("Zaengle") for Chang Ho Park. The geologic information contained herein is a compilation of certain available geologic data for the subject property, Tax ID =9-19-62 215ac, Athens Township, Bradford County, PA owned by Chang Ho Park. Any party interested in purchasing the subject property must make their own evaluation of the subject property and is responsible for performing their own due diligence on the subject property.

Zaengle and Chang Ho Park disclaim any and all liability for information and/or statements contained herein and make no representation or warranty as to the completeness or accuracy of the enclosed presentation or the information contained herein, including any representation or warranty of any kind as to the amount of "in place" or recoverable oil and gas reserves (proved, probable or otherwise) attributable to the subject property, as to geological and engineering interpretations related thereto or as to process which will be received for production.

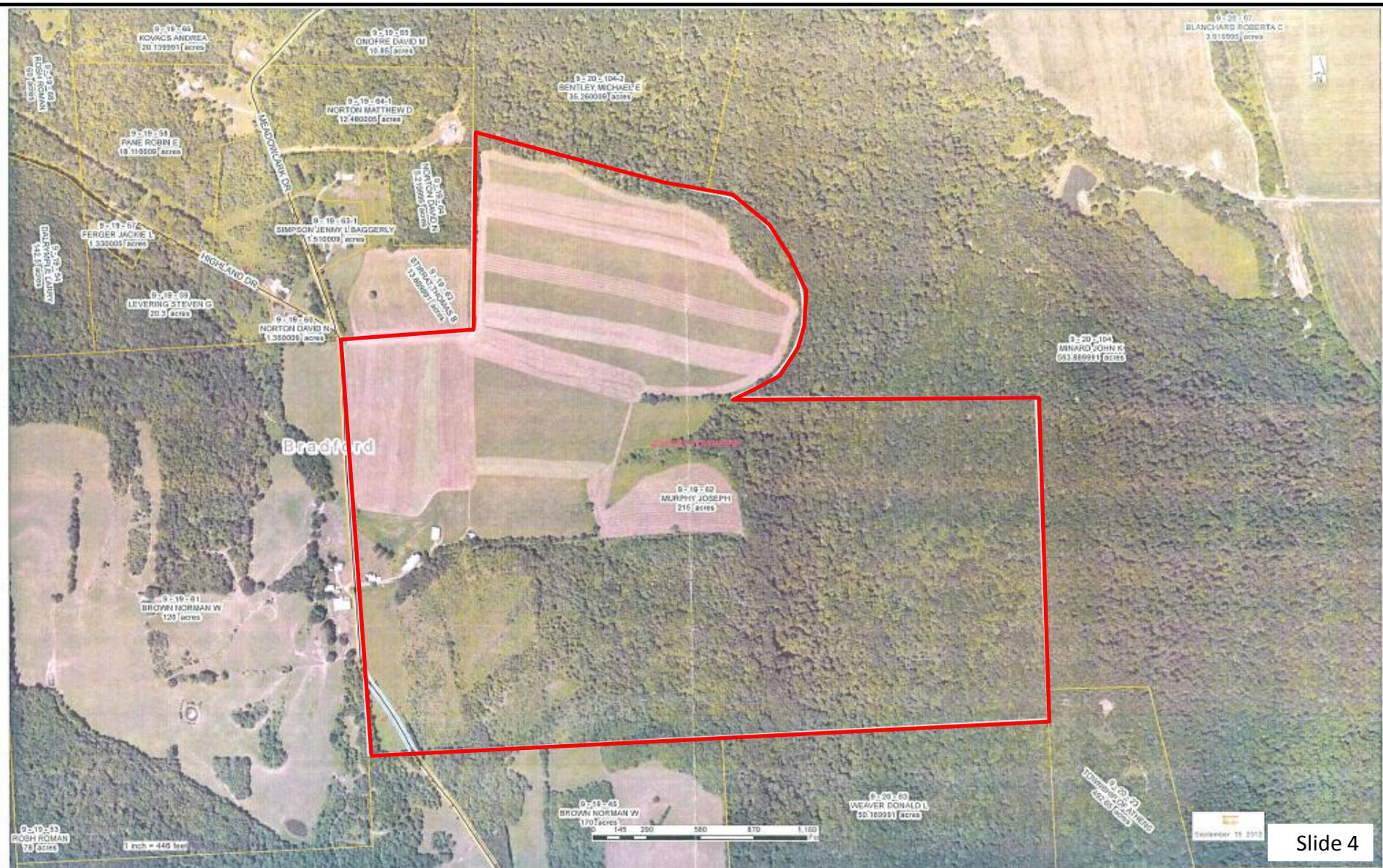
Any party interested in purchasing the subject property should understand that purchases of properties with potential "in place" or recoverable oil and gas reserves is making an investment which is subject to risks and uncertainties and is a highly speculative investment.

Location Map, Bradford County, PA

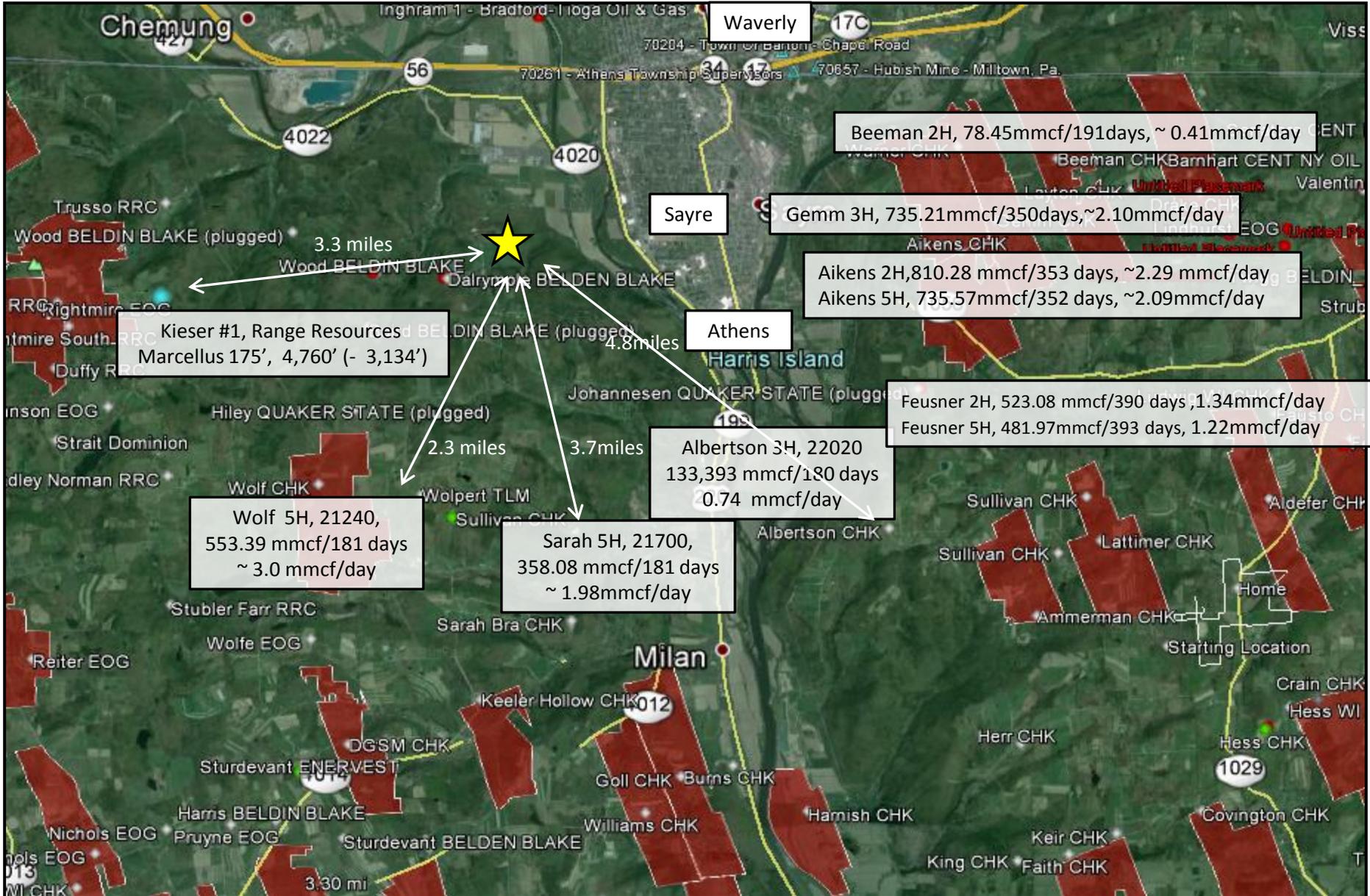
★ Tax ID =9-19-62, 215ac, Athens Township, Bradford County, PA



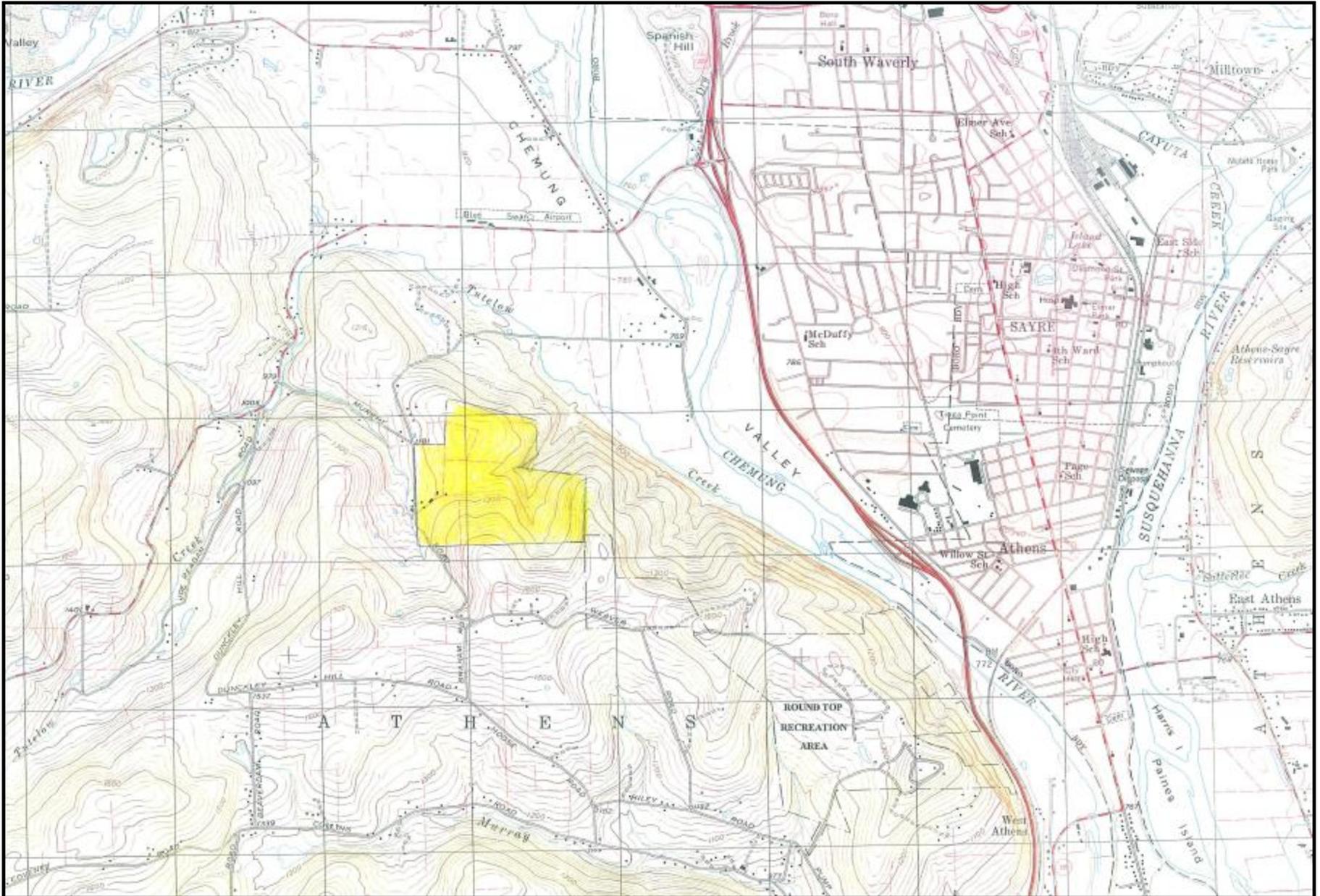
Tax Map, Tax ID =9-19-62, 215ac, Athens Township, Bradford County, PA



Competitor Activity & Production Map, Tax ID =9-19-62, 215ac, Athens Township, Bradford County, PA
 (Google Earth 8/15/13)

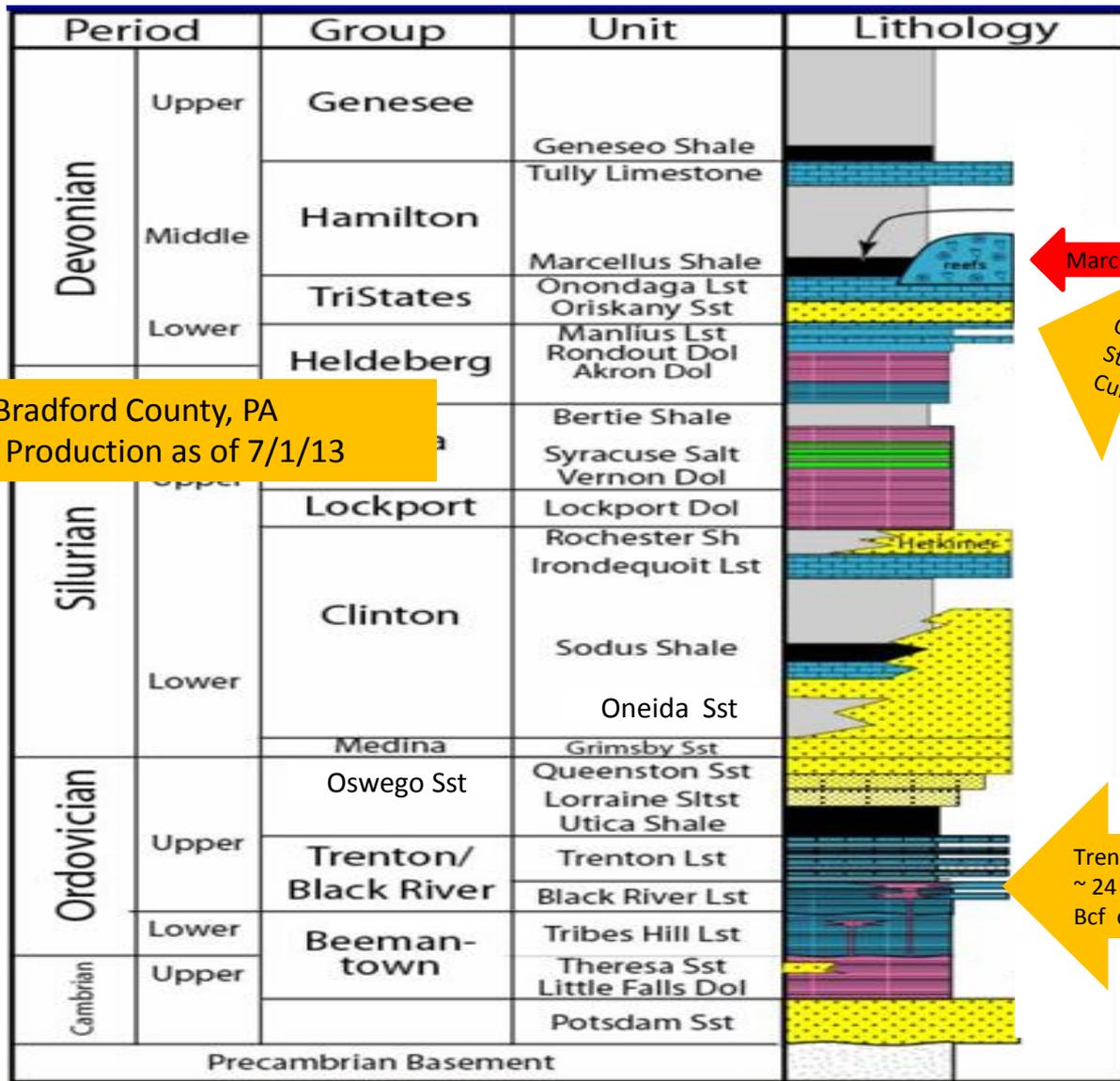


Topographic Map, Tax ID =9-19-62, 215ac, Athens Township, Bradford County, PA



Geologic Section / Historic Production

Tax ID =9-19-62, 215ac, Athens Township, Bradford County, PA



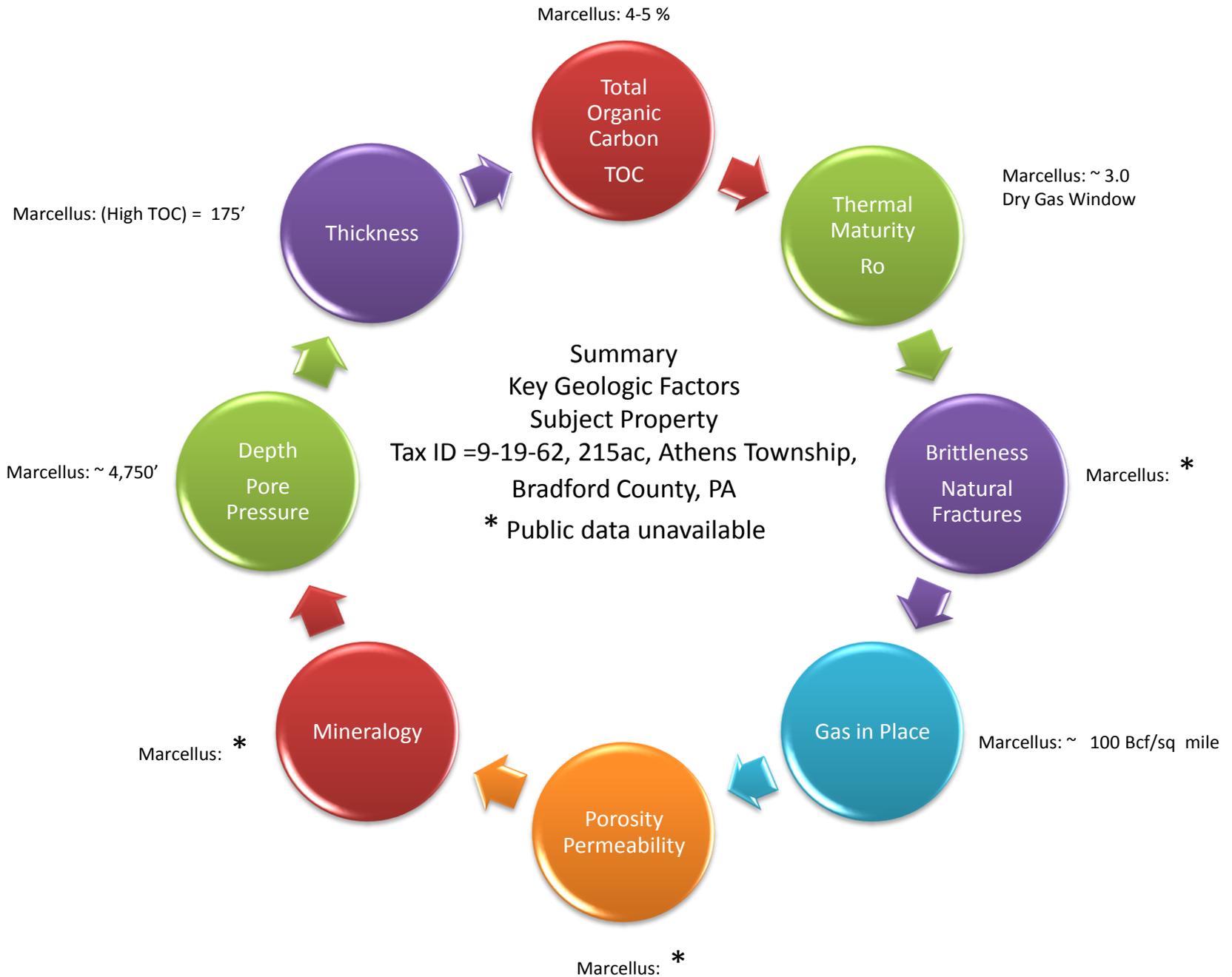
Athens township, Bradford County, PA
 ~0.9 Bcf Marcellus Production as of 7/1/13

Marcellus Shale

Oriskany Production ~ 9.0 miles East
 Stagecoach field 1985 ~ 14 Bcf,
 Currently used as gas storage field

Trenton Black River Langdon Field NY
 ~ 24 miles northwest, produced ~ 14.0
 Bcf currently producing.

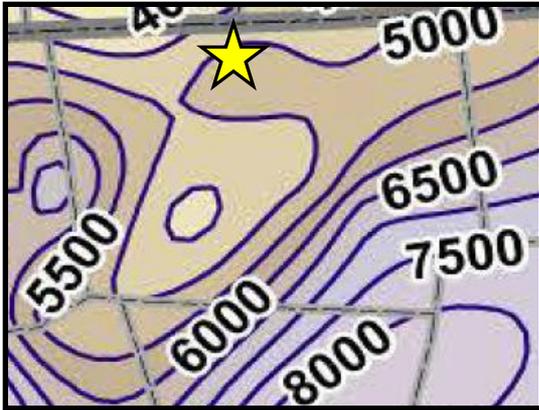
(R. Nyahay, J. Leone, L. Smith, J. Martin, D. Jarvie, 2007)
 Modified D. Zaengle 10/2008



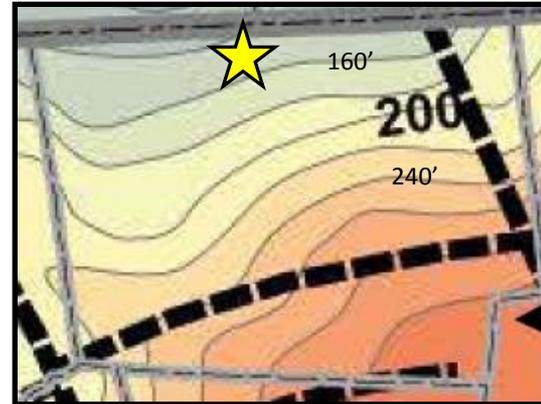
Regional Geologic Maps

★ Subject property, Tax ID =9-19-62, 215ac,
Athens Township, Bradford County, PA

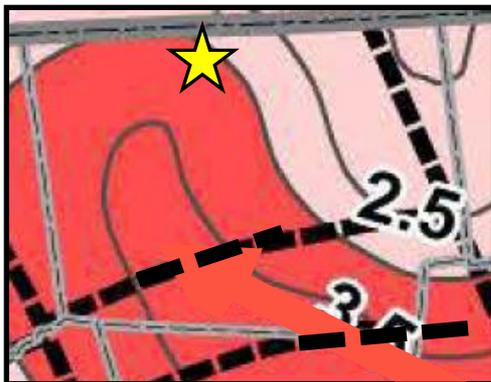
Regional Depth to base of Marcellus Shale
~ 5,000', Upper Marcellus @4,750'



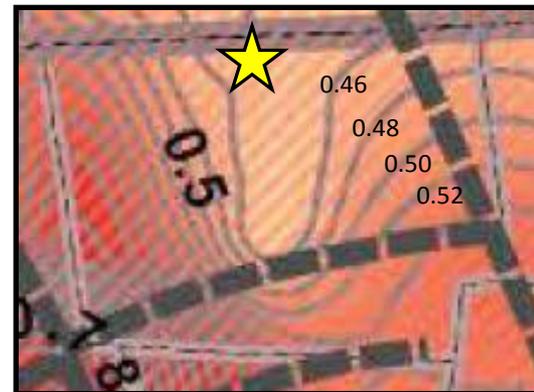
Gross Thickness
~ 175'



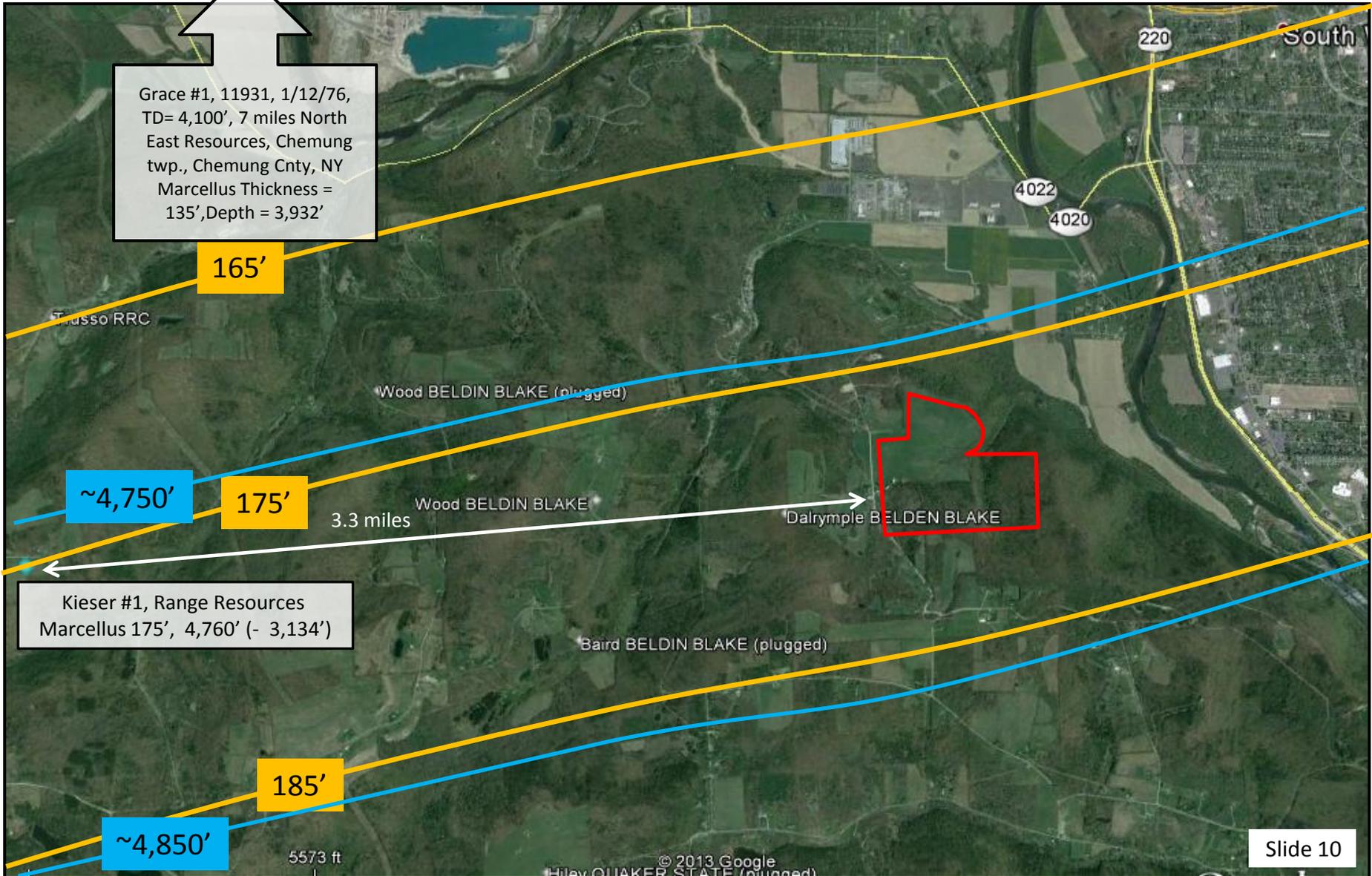
Thermal Maturation (Ro)
Marcellus: ~ 2.4
Dry Gas Window



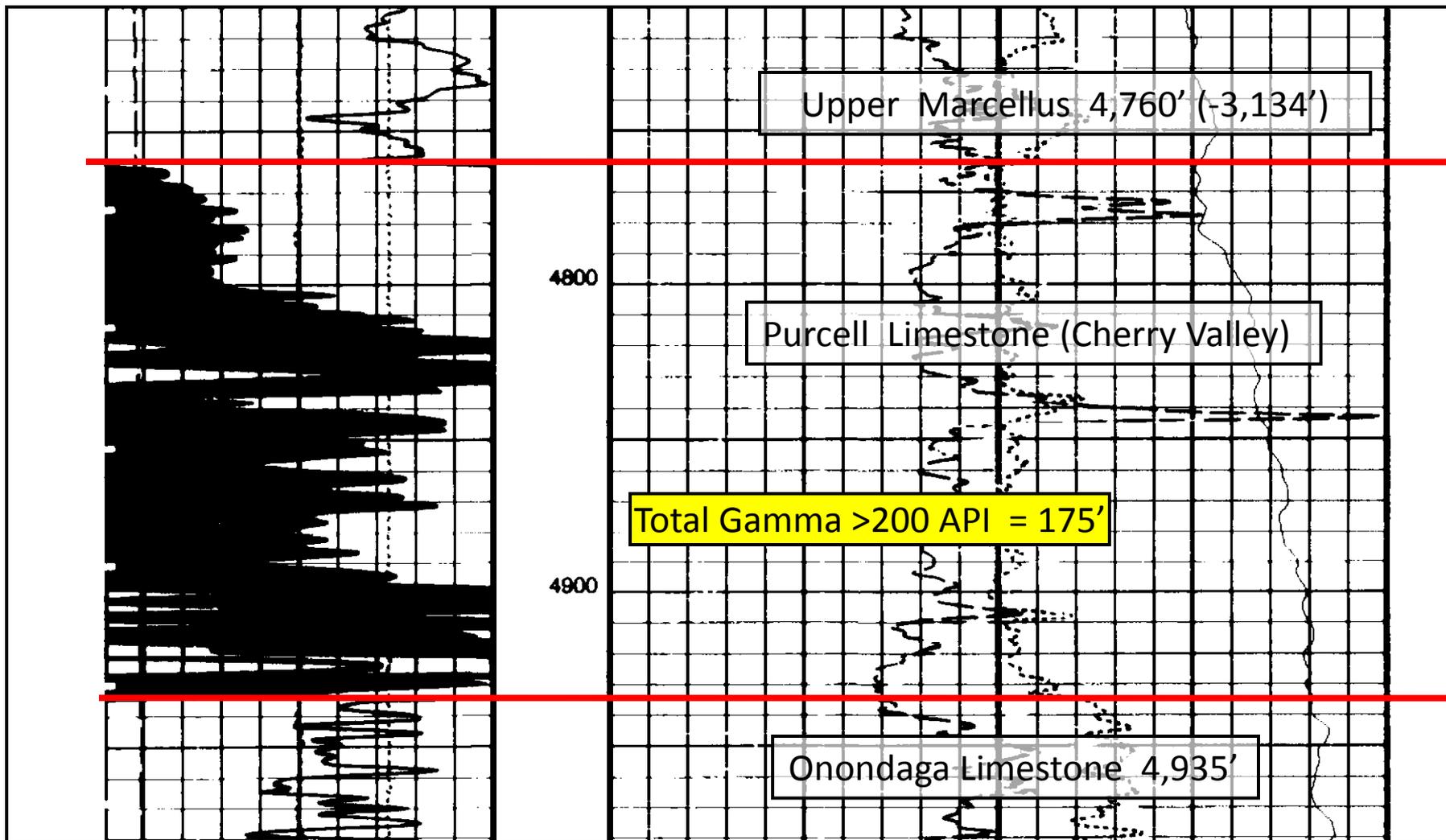
Pressure gradient (PSI/ft)
0.45 PSI/ft



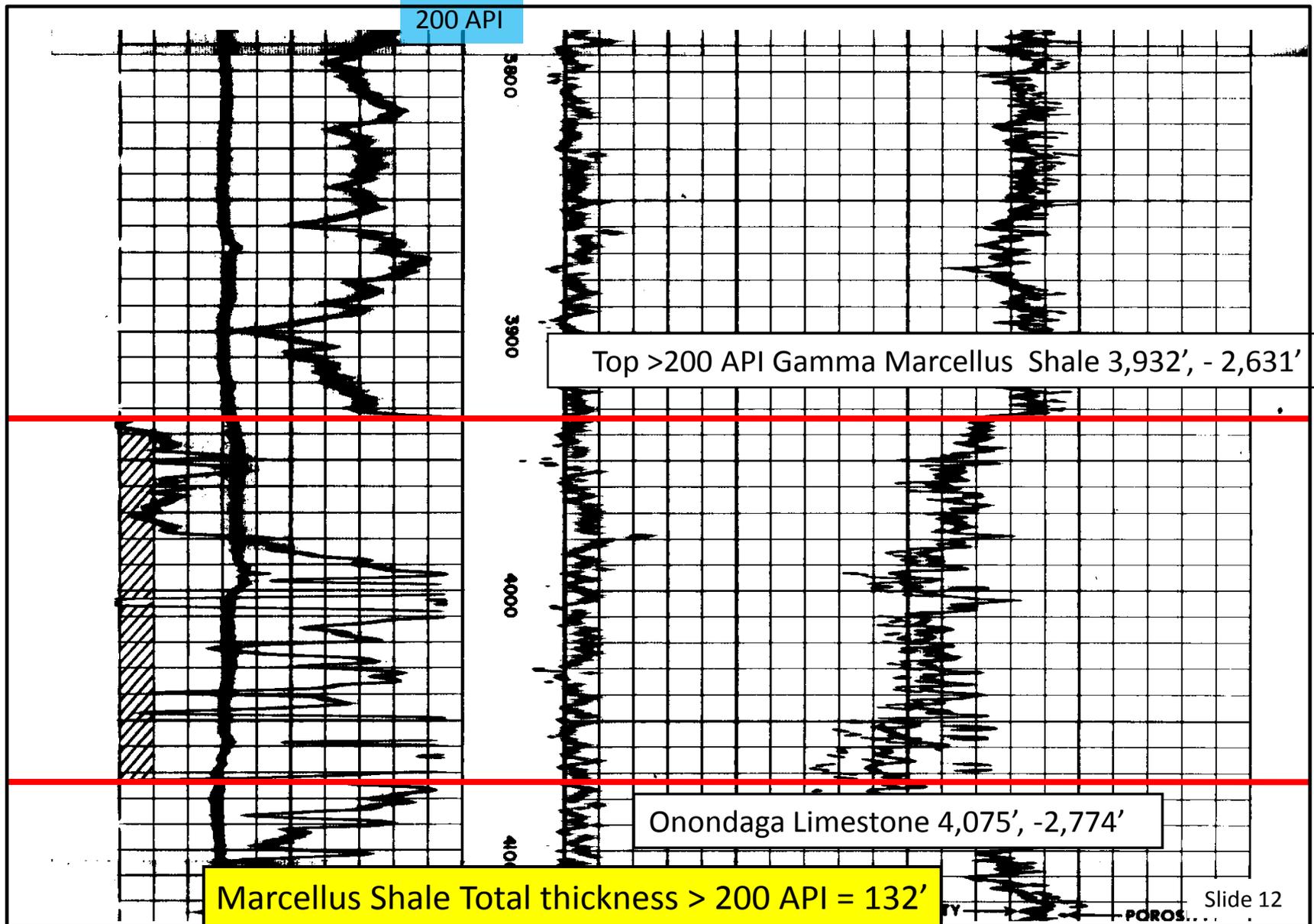
Subject Property, Tax ID =9-19-62 (red outline), 215ac, Athens Township, Bradford County, PA
 Marcellus Shale Depth = — Thickness = —
 (Google Earth 8/15/13)



Kieser #1, Range Resources, 20057, TD=12,228', KB=1,626'
9/05, Athens twp., Bradford cnty. PA



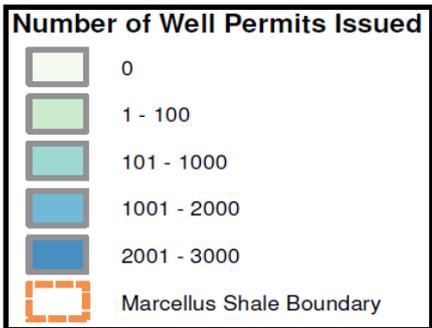
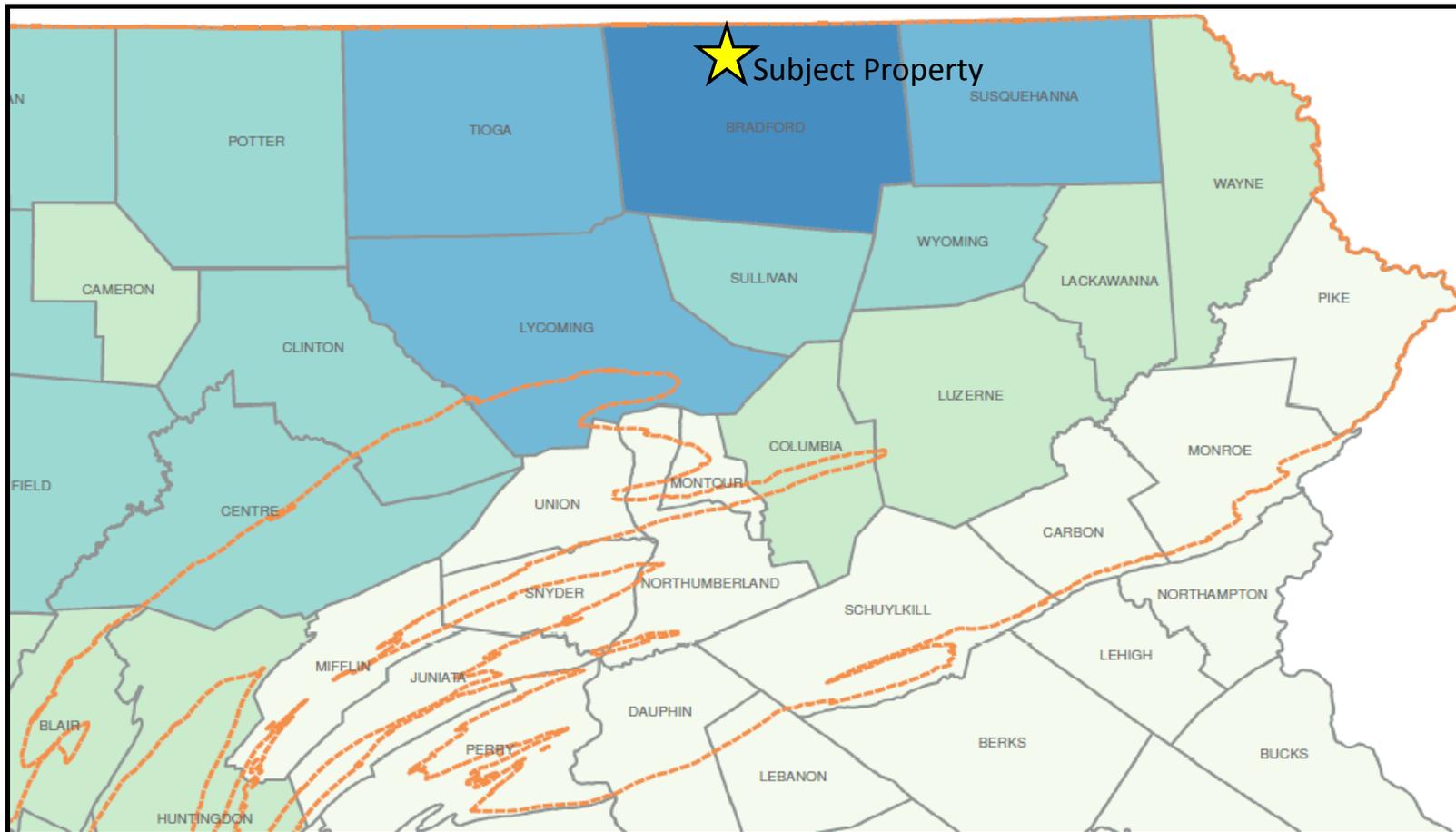
Grace #1, 11931, 1/12/76, TD= 4,100', KB=1,301'
East Resources, Chemung twp., Chemung cnty, NY



Northeast PA, Number of Marcellus Shale Well Permits by County

(from Bradford County Office of Planning & Grants, "Primer on Natural gas development in Bradford County, PA", 1/21/13)

(Data from DEP Oil and Gas Reports Website 1/21/13, http://www.portal.state.pa.us/portal/server.pt/community/oil_and_gas_reports/20297)



Number of Well Permits by County

2544, BRADFORD	197, SULLIVAN	23, CAMBRIA	0, CARBON	0, MONTGOMERY
1601, TIOGA	189, CENTRE	16, COLUMBIA	0, CHESTER	0, MONTOUR
1248, WASHINGTON	165, CLINTON	15, LUZERNE	0, CUMBERLAND	0, NORTHAMPTON
1171, SUSQUEHANNA	140, MCKEAN	10, VENANGO	0, DELAWARE	0, NORTHUMBERLAND
1160, LYCOMING	105, JEFFERSON	9, BLAIR	0, DAUPHIN	0, PERRY
835, GREENE	85, CLARION	9, MERCER	0, ERIE	0, PHILADELPHIA
435, WESTMORELAND	82, INDIANA	9, WARREN	0, FRANKLIN	0, PIKE
400, BUTLER	80, BEAVER	4, WAYNE	0, FULTON	0, SCHUYLKILL
400, CLEARFIELD	51, SOMERSET	3, CRAWFORD	0, JUNIATA	0, SNYDER
339, FAYETTE	46, ALLEGHENY	2, HUNTINGDON	0, LANCASTER	0, UNION
254, ARMSTRONG	38, CAMERON	2, BEDFORD	0, LEBANON	0, YORK
250, WYOMING	37, LAWRENCE	0, ADAMS	0, LEHIGH	
231, POTTER	33, FOREST	0, BERKS	0, MIFFLIN	
200, ELK	29, LACKAWANNA	0, BUCKS	0, MONROE	

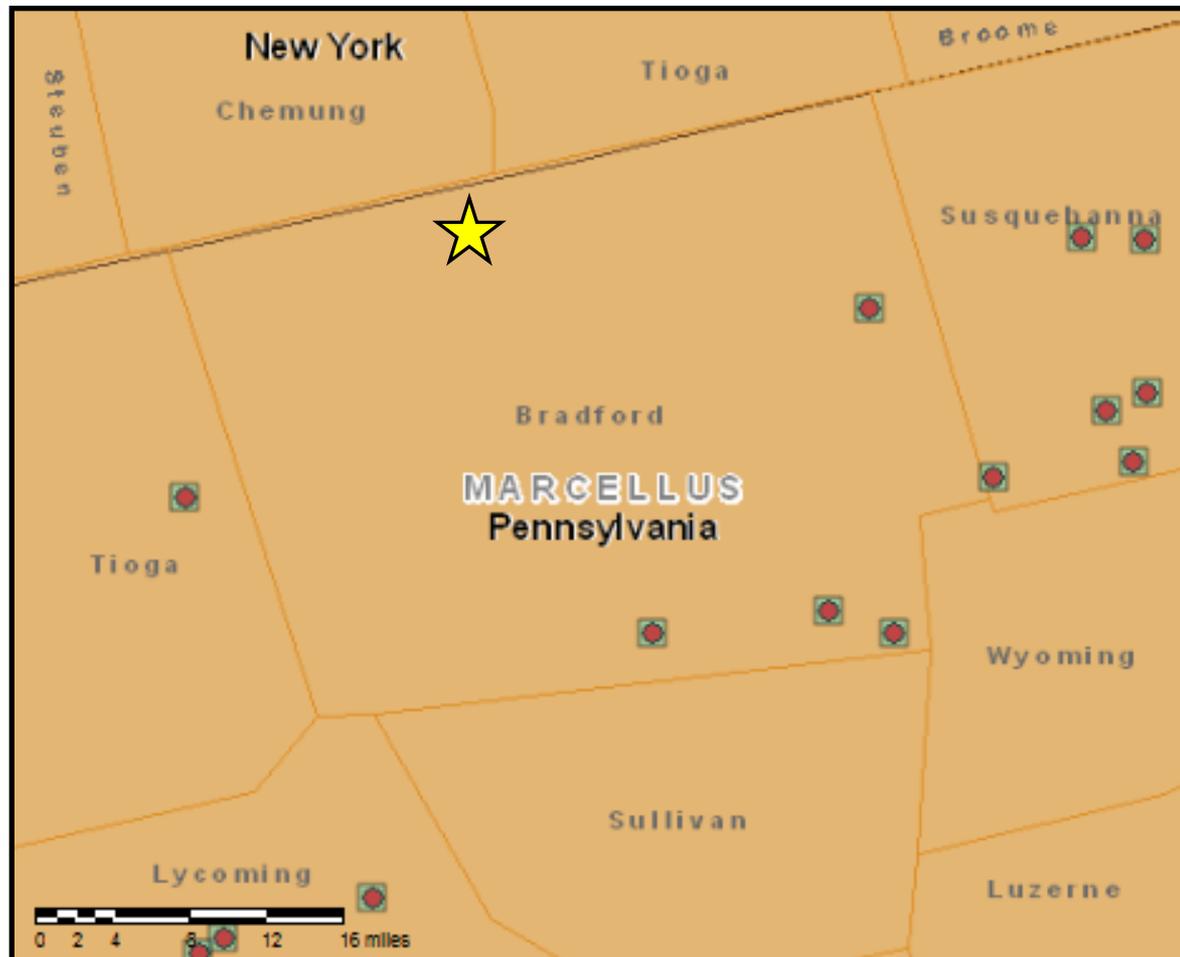
Warren Township & surrounding townships Active Drilling Rig Count, Bradford County PA

(from Bradford County Office of Planning & Grants, "Primer on Natural gas development in Bradford County, PA", 7/21/13)

(Barker Hughes <http://gis.bakerhughesdirect.com/RigCounts>, July 12, 2013), 4 Rigs Drilling in Bradford County, PA



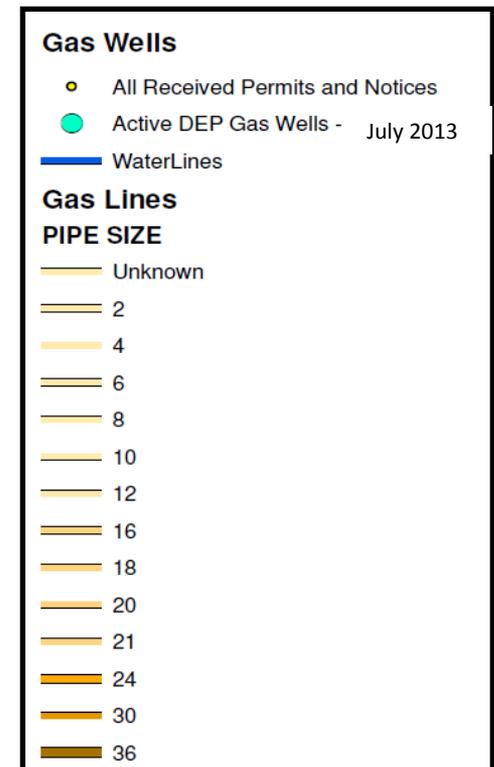
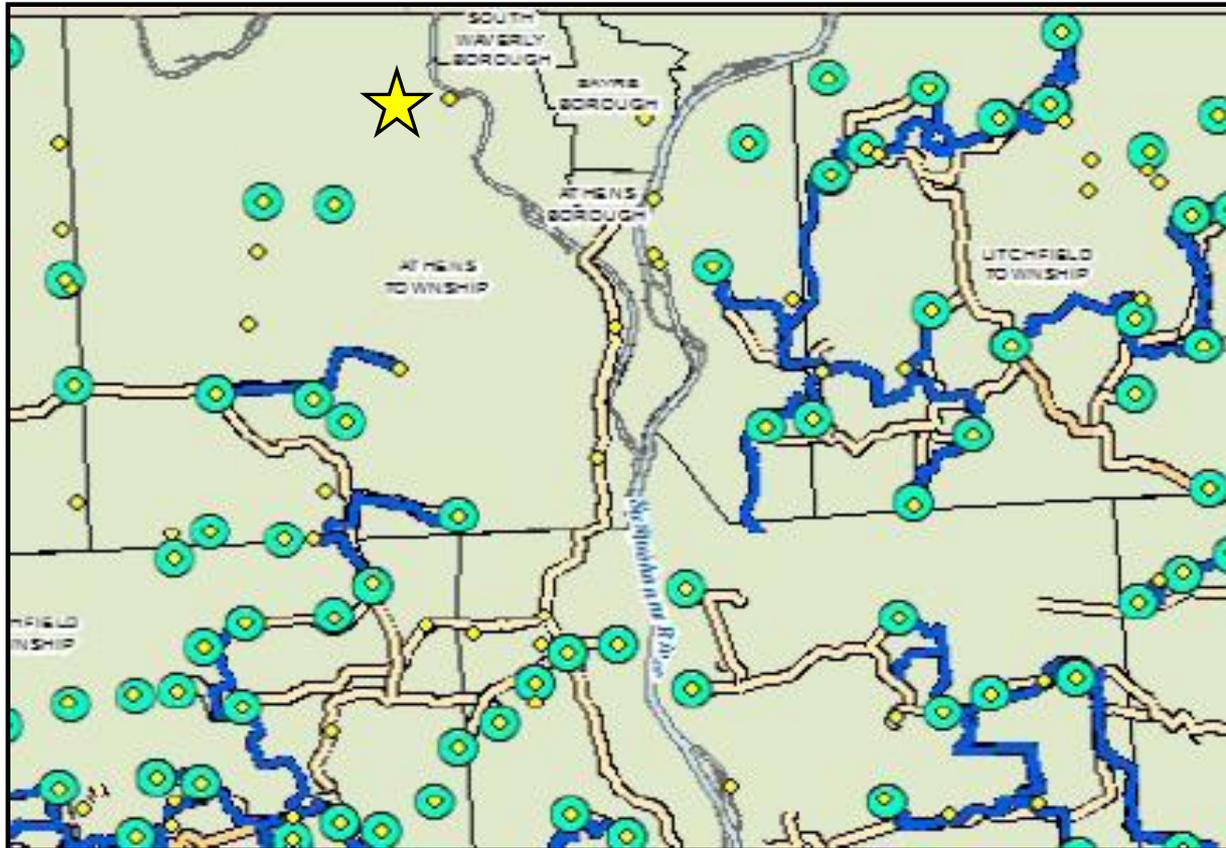
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Warren Township & surrounding townships Gas Well Activity Map, Bradford County PA

(from Bradford County Office of Planning & Grants, "Primer on Natural gas development in Bradford County, PA", 7/1/13)

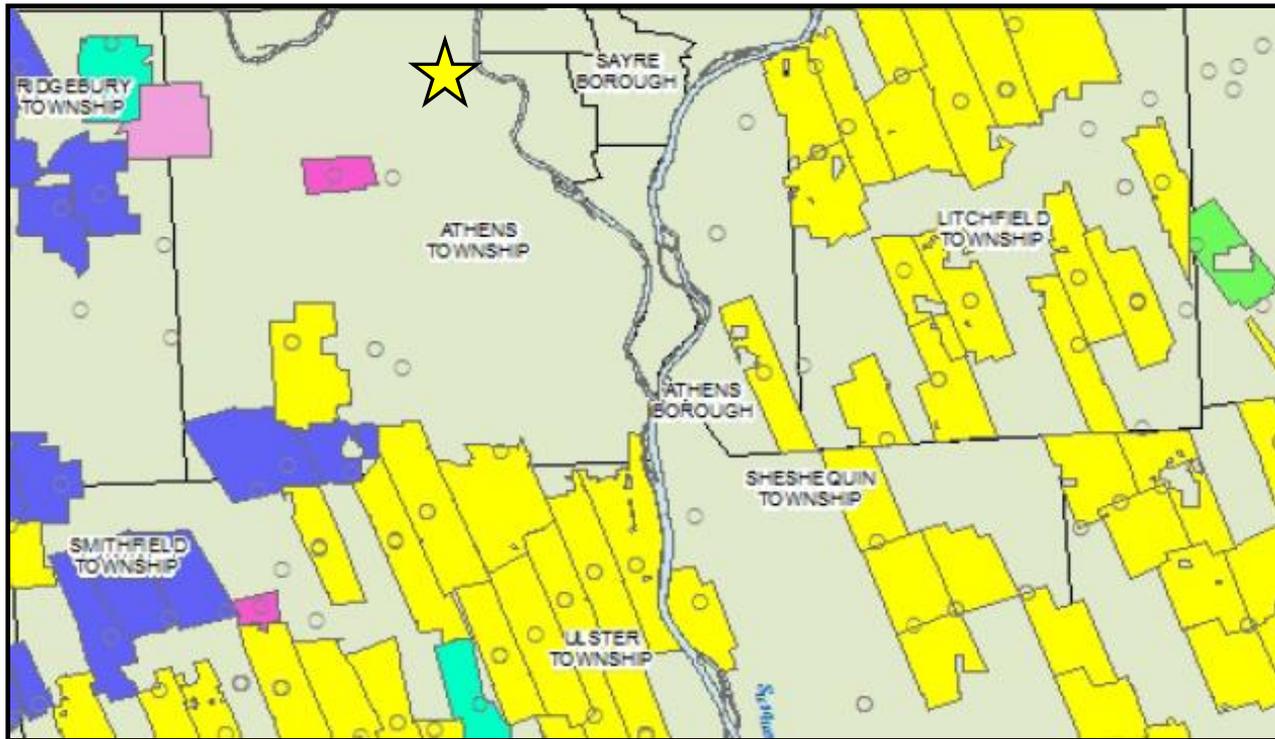
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Warren Township & surrounding townships Production Units, Bradford County PA

(from Bradford County Office of Planning & Grants, "Primer on Natural gas development in Bradford County, PA", 7/1/13)

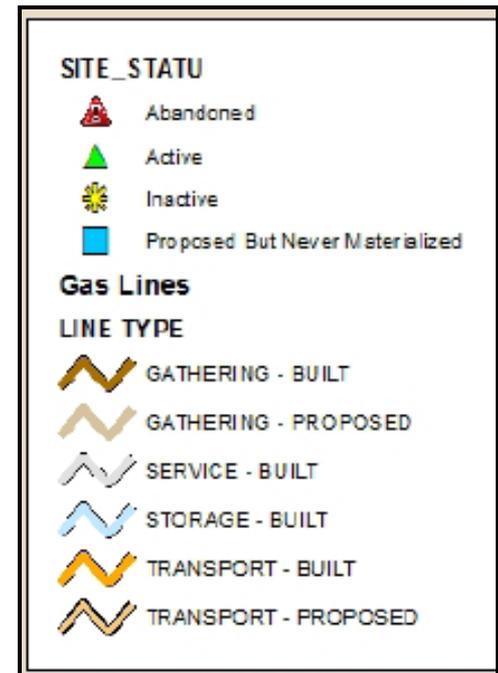
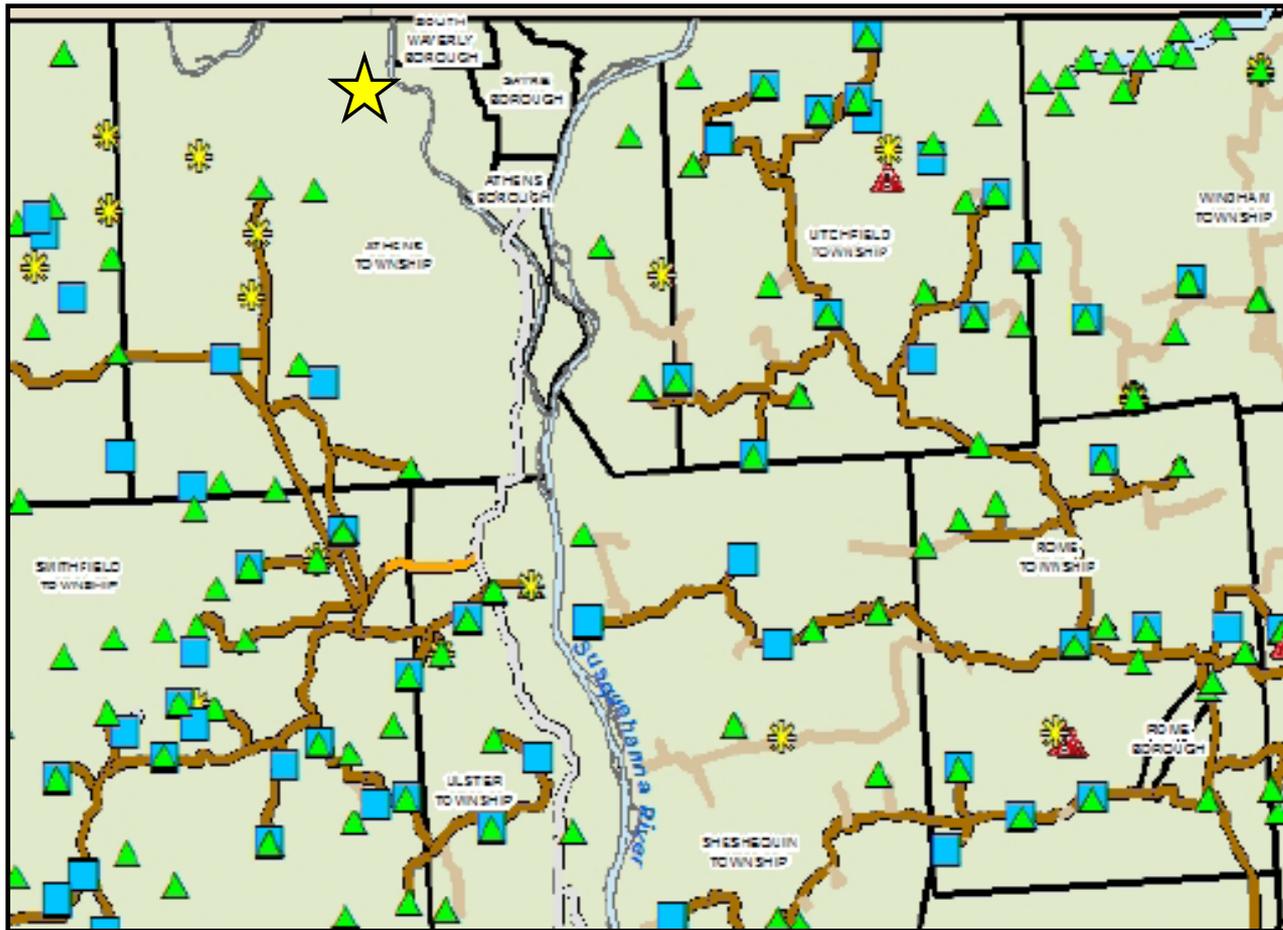
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Athens Township & surrounding townships Pipeline map, Bradford County PA

(from Bradford County Office of Planning & Grants, "Primer on Natural gas development in Bradford County, PA", 7/1/13)

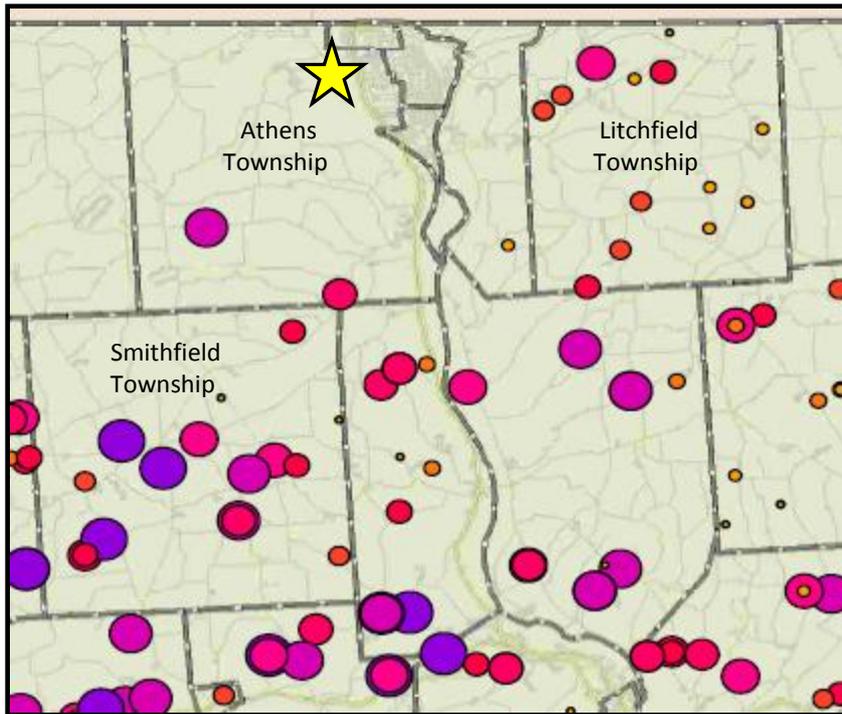
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Athens Township & surrounding townships Production map, Bradford County PA

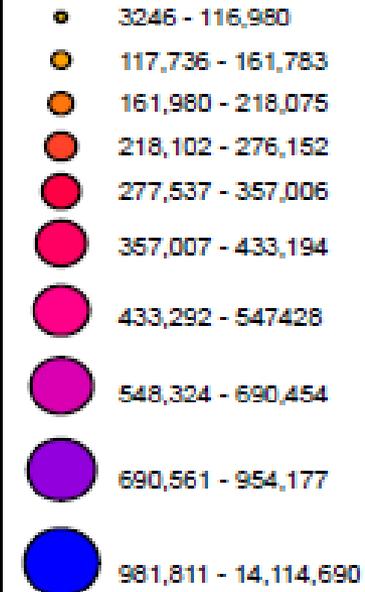
(from Bradford County office of Planning & Grants, "Primer on Natural gas development in Bradford County, PA", 7/21/13)

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Jan-July 2013 Producing Wells

Gas Quantity (Mcf)



Summary

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- Within Marcellus Shale production fairway.
- Marcellus > 200 API gamma ~ 175' thick, depth ~ 4,750'.
- High Marcellus Shale Total Organic Carbon (TOC) content 4.0 – 5.0 %.
- Within dry gas window $R_o = 3.0$, little if any processing required, high BTU value.
- Gas- in –place estimate for area (~100 Bcf/square mile).
- Tax ID =9-19-62 currently unleased.
- 1/1/13 – 7/1/13 Athens township produced ~ 0.9 Bcf.
- Bradford County, PA highest Marcellus Shale gas producing county in PA.
- Chesapeake drilling & producing to south and east of property.
- Excellent Economics relative to other dry gas shale plays. New York Pricing Premium. Near high-demand northeastern natural gas markets.
- Excellent Infrastructure (Railways, Roads) and access. Limited pipeline access near property.
- Rural area, sparsely populated, with pro-drilling landowners.
- Abundant Water Resources near property. Within Susquehanna River Basin.
- Timing of property development and production unknown.