Gas Migration into the Susquehanna River and Surrounding Area . . .

this page http://www.damascuscitizensforsustainability.org/2011/11/gas-migration-into-the-susquehanna-river-and-surrounding-area/

UPDATE - June, 2012

Chesapeake to Pay \$1.6 Million for Contaminating Water Wells in Bradford County Chesapeake Energy has agreed to pay \$1.6 million in damages to three families in Wyalusing, Bradford County. The case may be the first Marcellus contamination lawsuit to get resolved without a nondisclosure agreement, meaning the parties can speak freely about the case. Todd O'Malley, an attorney for two of the families, says the plaintiffs insisted on not signing a confidentiality agreement.

http://www.damascuscitizensforsustainability.org/2012/06/chesapeake-to-pay-1-6-million-for-contaminating-water-wells-in-bradford-county/

NOTE: these are some of the families mentioned in the documents below.

November 15, 2011

Started in September, 2010 and has not stopped.

This is only one of quite a few "incidents," but is what is the focus here — more examples like Dimock, PA, or the Tioga gas field, or Schreiner in western, PA, Pavillion, Wyoming, etc. THE ITEMS BELOW ARE IN CHRONOLOGICAL ORDER with three maps at the bottom. At least one lawsuit has been filed and some residents have had to leave their homes because of health effects — they have become refugees. I just got word that instead of three gas wells involved there may be 20 gas wells — we will post more info as we confirm. What really needs to be looked at here are the faults and fractures in this area — some of the gas wells are not fractured — these were the ones pinpointed by PA DEP and are shown in the bottom map. Chesapeake was fined \$900,000. for this "incident", but nothing has been corrected and the fine went where? ... I do not think it can be corrected. This is not the only place that this kind of damage has occurred. We have reports that the impacted area is over 60 square miles.

BA

Director

DCS

September 8, 2010

Methane found in Bradford County wells pressconnects.com Press & Sun-Bulletin

Methane found in Bradford County wells

STAFF AND WIRE REPORTS

SEPTEMBER 8, 2010, 10:00 AM

Pennsylvania environmental regulators are investigating the source of stray methane gas found in the North Branch Susquehanna River and six private water wells in Bradford County last week.

Environmental Secretary John Hanger says the gas "probably ... migrated through the ground as a result of drilling in the area." He says the gas is most likely not from the Marcellus Shale, but from a shallower deposit. WENY-TV reported Tuesday that Chesapeake Energy is evaluating its natural gas wells in the area, and is

taking corrective action. Chesapeake tested 26 residential wells within a half-mile radius of the river and found six of them in Wilmot Township had elevated methane levels. Methane was also detected in a crawl space of a seasonal home.

Susquehanna – gas migration – Chesapeake Gas Wells May Cause Susquehanna's Bubbles, State Says – Bloomberg 9/7/10. <u>View report as PDF.http://66.147.244.96/~damascu5/wp-content/uploads/2011/12/Susquehanna-gas-migration-Chesapeake-Gas-Wells-May-Cause-Susquehanna-Bubbles_State-Says_Bloomberg_090710.pdf</u>

PA DEP Investigates Source of Stray Methane Gas 9/8/2010. <u>View report as PDF.http://66.147.244.96/</u> ~damascu5/wp-content/uploads/2011/12/2010.pdf

NEXT see Terry Township 8/12/2010. <u>View report as PDF.http://66.147.244.96</u>/~damascu5/wp-content/uploads/2011/12/Terry_Township.pdf

News story 9/13/10 – with quotes from PA DEP head John Hanger. <u>View report as PDF.http://66.147.244.96/</u> ~damascu5/wp-content/uploads/2011/12/10.pdf

FROM PA DEP 9/17/10 On Sept. 2, DEP received reports of bubbling water on the Susquehanna River. DEP and Chesapeake believe the culprit is gas migrating from six wells that are located on three well pads on the "Welles property," which is approximately two to three miles northwest of the river. View report as PDF.http://66.147.244.96/~damascu5/wp-content/uploads/2011/12/Susquehanna-River-gas-migration-Newsroom_DEP_091710.pdf

PA DEP ordered review of a 4 1/2 mile radius of the Susquehanna gas migration 9/17/2010. <u>View report as PDF</u> http://66.147.244.96/~damascu5/wp-content/uploads/2011/12/20101.pdf

Chesapeake ordered to inspect 171 Marcellus wells – six wells may have leaked methane 9/17/2010. <u>View report as PDF</u>. *http://66.147.244.96/~damascu5/wp-content/uploads/2011/12/20102.pdf*

October 28, 2010 At least one lawsuit has been filed and some residents have left their homes — become refugees http://www.wbng.com/video/River-Bubbles-Contamination-Claims-in-Bradford-106140369.html. above includes video.

Then this 12/2/10. <u>View article as PDF</u>. http://66.147.244.96/~damascu5/wp-content/uploads/2011/12/10-The-Rocket-Courier.pdf

FROM PA DEP – \$900,000 – Chesapeake fine. <u>View report as PDF</u>. <u>http://66.147.244.96/~damascu5/wp-content/uploads/2011/12/PA-DEP-900000-Chesapeake-fine-Newsroom_DEP.pdf</u>

May 17, 2011 http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287? id=17405&typeid=1 "At various times throughout 2010, DEP investigated private water well complaints from residents of Bradford County's Tuscarora, Terry, Monroe, Towanda and Wilmot townships near Chesapeake's shale drilling operations. DEP determined that because of improper well casing and cementing in shallow zones, natural gas from non-shale shallow gas formations had experienced localized migration into groundwater and contaminated 16 families' drinking water supplies."

This above is disingenuous (fancy term for neat lie) editorial statement masquerading as authoritative information. Here though you do have the list of some of the townships involved, but the editorializing "improper well casing and cementing in shallow zones, natural gas from non-shale shallow gas formations had experienced localized migration into groundwater and contaminated 16 families' drinking water supplies." is not accurate – some of the gas wells involved have not been fractured – some have – and the isotopic tests that would prove the origins of the gas have not been made public and maybe have not been done. The casing situation is a distraction as an item to point to as the casings always leak – see Dusseault casing paper and others. SEE Dusseault: Why Oil wells Leak Cement Behavior and Long-Term Consequences http://www.onepetro.org/mslib/servlet/onepetropreview?id=00064733&soc=SPE and Durand http://www.damascuscitizensforsustainability.org/2011/12/how-fracked-gas-wells-become-aconduit-of-pollution/

Scranton Times article Published: July 10, 2011. View article as PDF. http://66.147.244.96/~damascu5/wpcontent/uploads/2011/12/2011.pdf

FROM THE ARTICLE: When former Gov. Tom Ridge was a guest last month on Comedy Central's "Colbert Report" to advocate for natural-gas drilling on behalf of the Marcellus Shale Coalition, the show played a clip of a Bradford County resident setting fire to her tap water – one of the 17 water supplies the state determined had been impacted by methane seeping from Chesapeake Energy gas wells and for which the company paid a \$900,000 fine.

Ouote from Baldassere in this:

The geology in Northeast Pennsylvania is also complicated and, in some rural regions, rarely studied, meaning there were few good historical maps for the drillers' reference, said Fred Baldassare, a former stray gas inspector with DEP who now owns Echelon Applied Geoscience Consulting. "It's a very complex system with deep-seated fractures and deep-seated thrust faults that come to the surface," he said. "These are pathways that are now being understood by industry that maybe at the beginning of the drilling process here they weren't appreciating."

AND THE MAPS

Three maps

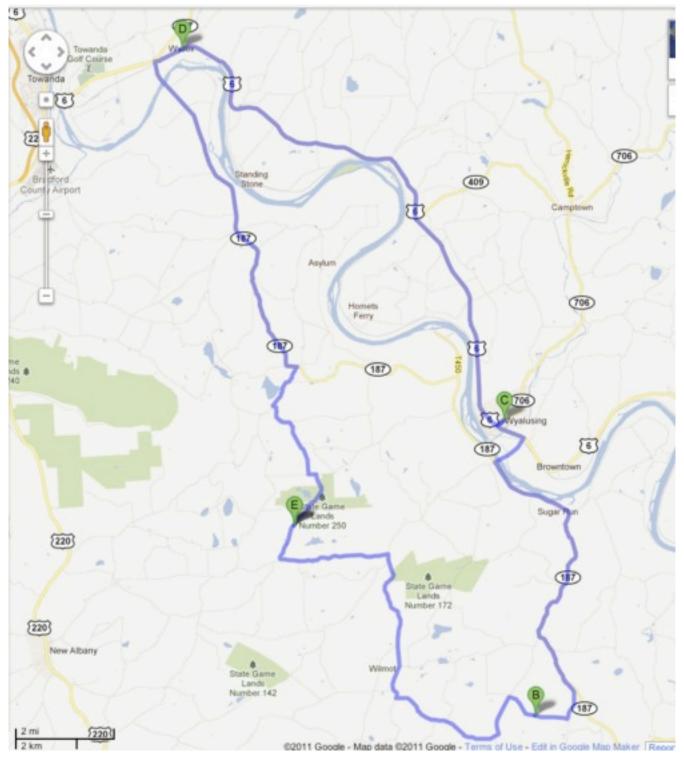
one—Bradford County as of Sept. 26, 2011, approximate area of gas migration as we have reports of and a map of where these gas wells are - showing impacted water wells



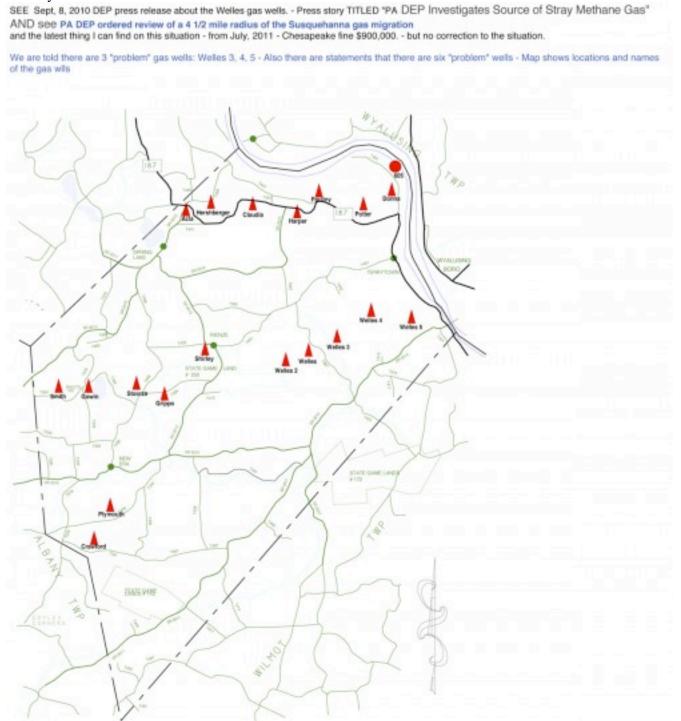
http://66.147.244.96/~damascu5/wp-content/uploads/2011/11/BRADFORD-county-MAP-impacted-

Map # two - shows the approximate area of gas migration allong the Susquehanna River that we have reports of – approximated by the purple line which are roads – this was a quick way of delieating the area by using roads and Google maps - the migration area is larger than the purple road loop. We have reports – some are in the media materials in this email of gas migration in Terry township, Wilmot Township, Wyalusing and Wysox – the actual area is not just where the roads are – the current guess is appox. over 60 square miles are impacted.

map http://66.147.244.96/~damascu5/wp-content/uploads/2011/11/Susquehanna-River-Sept-2011-gas-migration-area-map.jpg



and the third map - of where the gas wells pin-ponted by PA DEP and residents as being directly related to the gas migration - these wells have connected the formatio layers to the surface. — note the curve in the River to orient yourself



click on map to see larger version http://66.147.244.96/~damascu5/wp-content/uploads/2011/11/ Susquehanna-River-gas-migration-map-of-problem-gas-wells-on-Welles-property.jpg