

The Conventional Operator



Bi-Monthly Newsletter for Operators Exploring & Developing Conventional Oil & Gas Plays in Pennsylvania

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Well Logs: Let's Agree This Should Be Done

About once a year I make a plea to operators to turn in your well logs to the PADEP by the end of the optional 3-year confidentiality period the regulations allow. Some do this religiously, many operators do it not at all. Besides making the logs available for basic stratigraphic research, here are reasons I plead again.

- 1) When well logs and/or LAS files are released to the DEP, they are available to the public, including you. You can view these at the DEP or with a subscription, download them from DCNR's EDWIN website. With the public well logs you can compare the reservoirs and production in your wells to that of other areas and determine if your wells are performing as they should. If you employ a geologist, that person can do the quantitative analyses to determine saturations and porosities in each reservoir, estimate the reserves in each well, and map the changing reservoir quality for you across a broad area of your interest.
- 2) Upper Devonian sandstone wells **typically** drain about 3 to 5 acres for oil and 30-40 acres for gas. You don't need to hold on to your well logs thinking you are preventing a competitor from draining you. Your well doesn't drain that far.
- 3) Isn't the three year confidentiality period in PA for well logs enough time to pick up acreage adjacent to a strong well to protect it from lease line drilling by a competitor? After three years you've already gotten most of the flush production anyway. But if it's not enough, you can request 5-year confidentiality in writing.
- 4) You're bothered by having to internally track when to submit logs to the DEP. I don't blame you. If so, please read my proposal on page two of this issue.

About this Newsletter

"The Conventional Operator" is a free, bimonthly publication of **StratResources Geologic Consulting, PLLC** distributed via email. You may forward the newsletter to anyone you think would be interested. Comments are welcome. If at any time you no longer wish to receive the newsletter, email stratresourcesgeo@gmail.com and put the word UNSUBSCRIBE in either the subject or message box.

Cary Kuminecz CPG, PG is President/ Owner of **StratResources Geologic Consulting, PLLC** which provides prospect generation, geologic property evaluation, and well log scanning & digitization services for the oil & gas industry and landowners. For more information and for past issues of this newsletter please visit:

www.stratresourcesgc.com



Well Log Administration Proposal

At a former employer we had an administrative assistant who set aside a hard copy of each well log we acquired from each new well we had drilled. The assistant then placed these on a large bookshelf in order of their logging date and then placed a marker after each month's logging on which was written the date that those wells should be submitted to the PADEP, using the allowed three-year confidentiality window. At the first of each month the assistant checked the shelf to see if there were any logs due to be submitted that month. So, if several wells were logged during August of 2008, then the marker in the bookshelf indicated that those logs should be sent to the state at the beginning of August 2011. This system worked well and we remained caught up with the state requirements with minimum effort. We could also have done this electronically with Tiff images, pdf files, or LAS files as opposed to hard copies since the DEP will accept data in those forms as well.

As a conventional operator, perhaps with low margins for profitability, you may not have an assistant who can be assigned to keep track of the logs required by the PADEP, especially if you want to take advantage of the optional three-year confidentiality rule instead of submitting your logs immediately after receiving them from the logging company. Perhaps StratResources can help with this. Here's my proposal to help you administer your DEP well log submittal requirements.

- 1) Send StratResources Geologic Consulting your well log in hard copy, tiff, pdf, or LAS format as soon as you log the well. StratResources will keep track of the logging date and submit the appropriate log copy or digital file for you to the DEP three years from its logging date or any time prior to that at your discretion.
- 2) StratResources Geologic Consulting will do this **free of charge** with the condition that StratResources be allowed to use the raw log data in its business, but without releasing the log image or raw file to any third party, before the log becomes public. StratResources would enter into a confidentiality agreement with your company to protect your raw data and keep it proprietary during its confidentiality period. However, StratResources' geologic interpretations of your raw data would be available to StratResources to use in its own interpretive analysis and mapping.
- 3) If you only have hard copies of current or old well logs, StratResources will scan your well logs and provide you a Tiff image of each **at no charge**, subject only to the terms set out in paragraphs 1 and 2 above.

If you or your company might be interested in this Proposal, please feel free to contact me to discuss details.

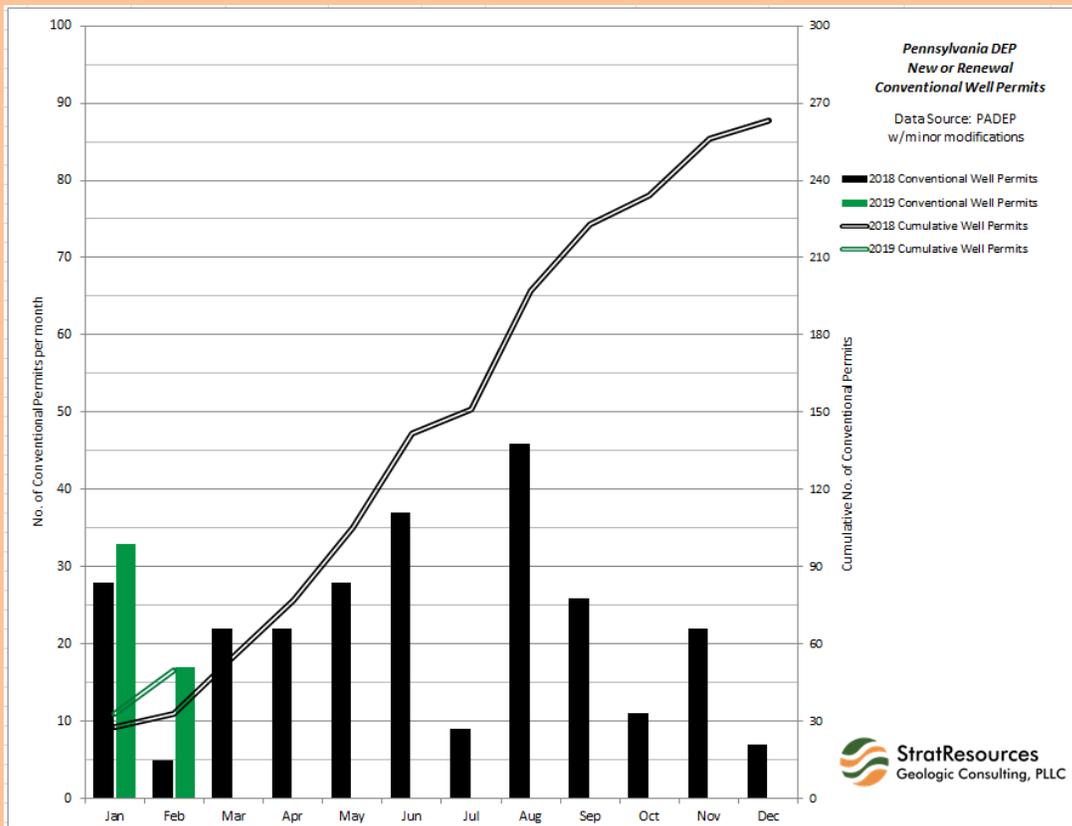
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Conventional Well Permits - Pennsylvania (2018 & 2019)



2019 Cumulative Permits 51% Higher Year-on-Year

January and February conventional well permits stand at 50 compared to just 33 by end of February in 2018. This is an increase of 51 percent. All permits to date have been for new wells as opposed to renewals.

Warren and McKean Counties from the Northern Oil Region continue to supply the greatest number of permits awarded. The 2019 permits consist of 39 for Oil Wells and eight for anticipated Combination Oil & Gas Wells. Three Gas Storage Field Wells, located in Bedford County have also been permitted.

Early data from March suggest a possible fall-off in conventional well permitting activity. Complete March and April data will be published in the June issue of this newsletter.

2019 Conventional Permits by County

County	No. Permits	% of Total
Warren	29	58.0
McKean	18	36.0
Bedford	3	6.0
Total	50	100.0



Success Stories, News, Announcements

★ 2018 Production Stars ★

Best cumulative production from a single conventional well spud during 2018.

OIL: Warren County

Operator: Wilmoth Interests Inc

Permit: 123-48150

Spud: 5/24/2018

Reported 2018 Prod: 1,598 BO

GAS: Warren County

Operator: Wilmoth Interests Inc

Permit: 123-48126

Spud: 1/8/2018

Reported 2018 Prod: 4,635 MCFG

In January **CNX Resources Corporation** discovered that one of its Utica Shale wells drilled in 2018 in Westmoreland County (Shaw 1G, Permit No. 129-28963) conveyed gas to nine shallow conventional wells nearby, while the Shaw well was being frac'd. The shallow wells were flared to reduce the pressure build-up within them caused by the subsurface escape of gas from the Shaw wellbore.

CNX was able to kill the Shaw well in early February and continued to monitor the pressure in the shallow wells. CNX plans to plug the Shaw 1G well and will not complete the three remaining wells on the Shaw pad. CNX estimates that capital expenditures of \$30 MM have been incurred on the four Shaw wells to date. CNX is reported to believe that the problem was due to a casing issue in the second string of intermediate casing at a drill depth of approximately 5200 feet. It is not known at this time if the shallow wells have been brought back into production; nor is it known what are the total liabilities CNX may be facing. This story has implications for all conventional operators whose wells share the same or nearby leases with unconventional wellbores. More information on this story can be found at

<https://www.post-gazette.com/business/powersource/2019/02/20/Leaky-well-cost-CNX-Westmoreland-flares-gas-pressure-Shaw/stories/201902200120> and

<https://www.post-gazette.com/business/powersource/2019/02/09/CNX-suspected-cause-Utica-Shale-natural-gas-well-Beaver-Run-Reservoir/stories/201902090029>



The Northeast 2019 Oil & Gas Awards Gala Dinner will be held at the Westin Convention Center Hotel in Pittsburgh on March 14th. Several conventional well operators and service

companies are among the award finalists. Further information can be found at

Further details may be found at

<https://www.oilandgasawards.com/northeast-2019/>

and

<https://marcellusdrilling.com/2019/01/finalists-announced-for-2019-northeast-oil-gas-awards/>



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Oil & Gas Industry and Landowners***

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- ◆ Core Descriptions
- ◆ Analysis of Drillers' Cuttings
- ◆ Well Log Quality Control at the Wellsite
- ◆ Volumetric Reserve Estimates
- ◆ Oil & Gas Data Compilations and Reporting
- ◆ Subsurface Geologic Reports/Interpretation of 3rd Party Reports
- ◆ Conversion of Paper Well Logs into Raster Format (TIF) or Vector Format (LAS) Files
- ◆ Training Classes in Stratigraphy of the Northern Appalachian Basin