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Subject: : Conservation

Topic: : Duke Univ. Marcellus Study

Re: Duke Univ. Marcellus Study

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URL:

Not invalid. Just a small amount of info. What's invalid are the media conclusions, not the researchers'. The research conclusions are merely incomplete, which is going to happen nearly 100% of the time if you rely on a single study. I'll explain the best I can. The writers aren't real forthcoming with the data, you have to back it out, which I'm doing to the best of my ability. I'd prefer if they had a table with each test site, location, and results. But they only give you that in graphical form, without exact location, and for overall conclusions they rely on averages.

Active site = near gas well. Non active site = far from gas wells.

Genesee formation - located in NY. They tested 1 "active site", and 8 non active sites. There was no increase in methane at the active site, the non active sites actually contained more methane. But the active site is only 1 data point, which is hard to make conclusions from.

Loyalsock formation - located in Bradford County. They tested 7 active sites and zero non active sites. The active sites averaged fairly high in methane, but because they tested no nonactive sites, you can't take this as "enriched". There is no baseline comparison.

Catskill formation - all of the "conclusions" are drawn from here, the test sites are in Susquehanna, Lackawanna, and Wayne counties. Per Table I, they have 13 baseline "active" test sites, and 5 non-active that they used for data. The map in Figure 1 shows more data points than that, so I assume that means they have thrown out some invalid data from a few of the sites, which is normal (assuming the data was truly invalid). But also keep in mind, that's 13 test sites near active wells, not 13 different active wells.

From the map on Figure 1, it appears that 8 of the 13 "active" sites in the Catskill formation are from right around the Dimock well, and 5 are from other wells. For the Table I results, what they have done is averaged these results in with the other (unenriched) active well sites, and yes, shown enrichment of methane in "active" sites. But surprise surprise, if you look at Figure 4A, of the "active" Catskill data, there are exactly 8 tests that were enriched with methane, and 5 that fall along the baseline with methane concentrations around the same levels as the non-active sites.

Thus, it is not clear, but it is possible, even likely, that the ONLY sites that were enriched with methane due to drilling activity in this study were located very close to Dimock. By averaging those results in with other "active" sites in the Catskill, as well as active sites in the Loyalsock (high methane but no baseline comparison) and Genesee (active well not enriched), the average is indeed higher for active sites than non-active sites, but this all may or may not be attributed solely to a single gas well in Dimock.