

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK**

JASON BAKER, JOHN BREWSTER, JOANN
BREWSTER, MAXINE CONDON, KAREN FAR-
RELL, BROOKS LIDDIARD, JANET LIDDIARD,
JAMES MCDERMOTT, PAUL MOREY, DONETTA
MOREY, JOE TODD, BONNIE TODD, TOM
WHIPPLE, PAULINE WHIPPPLE,

Plaintiffs,

-vs-

ANSCHUTZ EXPLORATION CORPORATION,
JOHN AND JANE DOES 1 THROUGH 100,

Defendants.

DECISION AND ORDER

11-CV-6119-CJS

APPEARANCES

For Plaintiffs:

Jose A. Almanzar, Esq.
Katherine E. Mayo, Esq.
Marc J. Bern, Esq.
Tate James Kunkle, Esq.
Bettina L. Hollis, Esq.
Napoli Bern Ripka Shkolnik & Associate, LLP
350 Fifth Avenue Suite 7413
New York, NY 10118
(212) 267-3700

For Defendant:

Michael N. Mulvania, Esq.
Aaron M. Panner, Esq.
Mark C. Hansen, Esq.
Michael J. Guzman, Esq.
Saritha K. Tice, Esq.
Kellogg Huber Hansen Todd Evans & Figel
PLLC
1615 M Street, N.W. Suite 400
Washington, DC 20036
(202) 326-7900

Christopher D. Thomas, Esq.
Nixon Peabody LLP
Clinton Square
P.O. Box 31051
Rochester, NY 14603
(585) 263-1087

INTRODUCTION

Siragusa, J. This action alleging negligence and other related causes of action involves a gas drilling company that Plaintiffs allege has contaminated their residential water wells through its gas exploration in Chemung County, New York. The case was removed by Defendant Anschutz Exploration Corporation (“Anschutz”) and is now before the Court on Anschutz’s motions seeking an order granting summary judgment, ECF No. 132, and striking Plaintiffs’ expert testimony, ECF No. 133. For the reasons stated below, both applications are granted.¹

FACTUAL BACKGROUND

Plaintiffs are residents of Chemung County, New York State, who rely on individual residential wells for all their water. Anschutz operates two natural gas wells, Dow # 1 and Dow # 2, drilled in 2010. Anschutz did not use hydraulic fracturing to construct either well. Plaintiffs claim that Anschutz’s Dow # 1 well is causing natural gas contamination of their well water. Dow # 1 was drilled vertically to a depth of 9,023 feet, and at that point, makes a roughly ninety-degree turn and continues to a depth of 9,718 feet with a total measured length of 12,840 feet. At the surface, the well is approximately 2,800 feet (about half a mile) from Plaintiffs’ homes.

¹ Following oral argument on the motion, the parties filed a stipulation on December 1, 2014, ECF No. 142, in which Plaintiffs agreed to withdraw their Sixth, Seventh, Eighth, Ninth and Tenth claims.

Drilling of Dow # 1 commenced on April 26, 2010, and was completed on June 18, 2010. During the design and permitting phase, the New York State Department of Environmental Conservation (“DEC”) and Anschutz were aware that local residents obtained their water supply from wells. They were also aware that shallow sources of naturally occurring methane gas might be encountered during the construction of Dow # 1. Consequently, the DEC permitted and Anschutz designed the well with numerous redundant mechanical features to ensure that shallow methane could not travel up the vertical portion of the well—either inside or outside the steel casing.

During construction, DEC’s Joseph Yarosz (“Yarosz”) was responsible for regulatory supervision of the well’s construction. He inspected both the Dow # 1 and Dow # 2 wells in person more than fifty times during construction. Yarosz testified at his deposition that Anschutz satisfied all permit conditions and complied with all applicable laws and regulations during the construction of both wells. Yarosz also testified that Anschutz encountered no material problems in the wells’ construction. Further, Plaintiffs’ hydrology expert, Paul Rubin (“Rubin”), agreed during his own deposition that the vertical portion of Dow # 1 is not the source of any gas leaks or contamination, Rubin Dep. 248:7–13, and that Anschutz acted reasonably in construction of Dow # 1, the only well Plaintiffs cite as a source of their water contamination. Further, Plaintiffs’ well construction expert, Gary Gartenberg, also agreed that Anschutz did nothing wrong in construction of the Dow # 1 well.

More than two months after Dow # 1 was completed, Plaintiffs Joseph Todd and Tom Whipple made complaints about turbidity and methane problems in their water wells. They reported those conditions to the Chemung County Health Department in

September 2010. On September 13, 2010, the Chemung County Health Department referred their complaints to the New York DEC. Yarosz investigated the complaints. During his investigation, Yarosz had dozens of interactions with residents about their complaints, including personal visits, phone calls and email correspondence. He sampled the water, interviewed those complaining of contamination, and spoke with area neighbors, and well drillers. In November 2010, DEC issued a fact sheet indicating that gas in area water wells had been common for years prior to Anschutz's exploration activities. Yarosz concluded that since methane was not toxic, residents should install vented well caps on their wells. DEC found that the Dow wells were constructed in such a manner as to make it highly unlikely that gas from deeper formations could migrate up the wellbore and into any water aquifers. DEC stated that:

The cause of the problems are likely associated with seasonal low water levels in a densely populated area which may have produced an intense draw down of the aquifer in the area known to have shallow, naturally occurring gas. The hydrostatic pressure of the column of water in the well would decrease as water levels lowered allowing gas to more freely enter the water well.

Memorandum from Linsa Collart, New York State Department of Environmental Conservation, to Bradley Field and Jack Dahl, at Horseheads-001955, Jan. 31, 2011, ECF No. 133-12 (attached to Mulvania aff. as Ex. 10).

Plaintiffs' expert, Rubin, also investigated the water in Plaintiffs' wells, measuring its pH, and sending a sample to a laboratory to be analyzed. He also researched the seasonal fluctuation in groundwater levels in 2010. Rubin disputes that there were unusual groundwater level fluctuations in 2010 that would reflect unusually high temperatures or explain the decline in Plaintiffs' water quality.

DEC noted that as the aquifer recharged with water later in the fall, conditions in the water wells improved. At a December 2010 meeting with some of the plaintiffs, Chemung County commissioned isotopic analysis of the natural gas from Dow # 2 (a gas well located at the same site as Dow # 1), as well as the natural gas in the water wells of Plaintiffs Todd and McDermott. Similar to Dow # 1, Dow # 2 was drilled into the same Black River formation at a depth of approximately 10,000 feet. At the time of the testing, Dow # 1 had become inaccessible due to the presence of completion operations equipment. See Isotech Letter at Horseheads-001947, ECF No. 132-15 (attached to Guzman Decl. as Ex. 12); Dow 1 Chronology at 14-15, ECF No. 132-7 (attached to Guzman Decl. as Ex. 4). Isotech Laboratories, Inc. ("Isotech"), performed the tests.

Anschutz's experts, independent consultant² Edward Hinchey, P.G. ("Hinchley"), and hydrology professor Donald Siegel, Ph.D. ("Siegel"), analyzed the isotopic test results obtained by the county health department. In their report, they wrote that:

The DOW wells are completed in the Black River formation. Natural gas from the wells completed in the Black River formation cannot rise from 9,900 feet (nearly two miles) deep to the surface water aquifer. The lowest pressure in the Black River formation occurs near the well bore of the DOW wells – any water or gas movement would have to be from the formation (under high pressure) to the wellbore that is connected to the atmosphere. Hydraulics aside, we can independently test whether the natural gas at Plaintiffs' wells consists of Black River formation gas by conducting isotopic analysis of the carbon and hydrogen in the methane.

* * *

By measuring the amounts of carbon and hydrogen isotopes in methane, their isotopic differences can be used to fingerprint methane origins. This fingerprinting method is widely accepted and has been used for over 50 years in the environmental/natural, medical and pharmaceutical sciences after first being used by Schoell in 1980, and followed by many others (e.g. Chung, 1988; and Breen ,2007).

² The expert report does not detail Hinchley's field of expertise, and his curriculum vitae is not appended to the exhibit as filed, ECF No. 132-19.

Big Flats Groundwater Investigation 6-5-6-6. Isotech's test results showed that Plaintiffs' samples contained different proportions of methane, ethane, and propane than the Dow # 2 well. Isotech concluded that the gas in Plaintiffs' wells could not have come from Dow # 2. Plaintiffs contend that the results are irrelevant because they are not citing Dow # 2 as the source of contamination, and Isotech's results do not adequately take into account gas mixing. As a result, Plaintiffs assert that Isotech's testing is not an accurate measure of the origins of the gas in Plaintiffs' water wells.

Prior to commencing this action in February 2011, Plaintiffs performed no water quality testing of their wells, but Plaintiff Todd anecdotally related that he had to change a three-month particulate filter on a daily basis. Following discovery, Plaintiffs now allege that contamination from the Dow # 1 well consists of natural gas, iron, and manganese. Their complaint raises causes of action for negligence, negligence *per se*, nuisance, premises liability, trespass, a violation of New York Navigation Law, strict liability, a violation of New York General Business Law § 349, fear of developing cancer, and a cause of action for future medical monitoring. In their prayer for relief, Plaintiffs seek damages of \$150 million for each cause of action, and exemplary or punitive damages of \$500 million, plus costs.

During the drilling of Dow # 1, Anschutz obtained gas samples from several different depths, ranging from 167 feet, to 9,981 feet, and six other distances between those two. Anschutz had the samples tested by GeoMark Research, Ltd., for which performed a carbon isotopic analysis on the samples. During discovery, Anschutz obtained additional gas samples from eight of Plaintiffs' water wells. Isotopic testing of those samples by Isotech revealed that the samples of gas obtained in drilling Dow # 1 from

the relatively shallow depths of 167 to 2,138 feet had carbon isotopic ratios similar to the carbon isotopic ratios measured in Plaintiffs' water wells. Plaintiffs contend that this evidence shows gas mixing. However, Anschutz states that during the drilling of Dow # 1, it isolated the well from those pockets of shallow gas by using steel casing, cement, and other devices. Testing also revealed that the deeper gas samples, from 8,713 feet and deeper, are much lighter in carbon than any of the natural gas found in Plaintiffs' water wells.

Anschutz's experts, Siegel and Hinchey, analyzed the isotopic testing results of the gas from Dow # 1 and Plaintiffs' water wells and concluded:

As the Dow # 1 isotopic samples get deeper, the carbon isotopic ratios diverge markedly from Plaintiffs' well samples. The Dow # 1 mud gas at the start of the Trenton horizon and lower (that is, the Dow # 1 samples from 8,713 feet and deeper) are *much* lighter in carbon than *any* of the gas in Plaintiffs' water wells. Simply stated, just as with the Dow # 2 gas, the gas in Plaintiffs' water wells did *not* originate in the deep gas-producing formations of Dow # 1.

Siegel Suppl. Rep. at 18, ECF No. 132-19 (attached to Guzman Decl. as Ex. 16). Citing to the Mayo Decl., Oct. 21, 2014, ECF No. 136-2, Ex. N at 17, an article by Anthony W. Gorody entitled "Factors Affecting the Variability of Stray Gas Concentration and Composition in Groundwater," Plaintiffs assert that this conclusion is uninformed by analysis of multiple samples from baseline groundwater investigations, potential point sources, and impacted water sources. They further assert that taking only one sample of the gas in Plaintiffs' water wells on one day does not reliably show the origin of the gas in the water wells. Further, although Anschutz's experts contend that "the isotopic testing demonstrates—conclusively—that the methane in Plaintiffs' water wells did not originate in the deep geological formations into which Dow # 1 and Dow # 2 were drilled," Siegel Suppl. Rep. 15. On the other hand, Plaintiffs' expert, Rubin, asserts that as gases mi-

grate upward through the earth, they pass through various gas-bearing horizons, each with its own isotopic signatures, making Anschutz's isotopic testing inadequate.

With regard to the health monitoring cause of action, Plaintiffs stress that hemochromatosis, a chronic condition in which the body absorbs too much iron over a period of years, can lead to liver and colon cancer. Anschutz, however, counters that even if the contamination is attributable to Dow # 1, the risk of developing cancer is *de minimis*.

Also listed on the docket of this case is non-party Schlumberger Technology Corporation, which provided limited cementing services at the two Dow wells. After Schlumberger moved to quash Plaintiffs' subpoenas, Plaintiffs withdrew the subpoenas. It does not appear that Schlumberger has been further involved in this litigation and is not relevant to the two motions under consideration here. Further, it does not appear that Plaintiffs have identified the John and Jane Does 1 through 100, so the Court will disregard those placeholder defendants for the purposes of this motion.

STANDARDS OF LAW

Summary Judgment Standard

Summary judgment may not be granted unless "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). A party seeking summary judgment bears the burden of establishing that no genuine issue of material fact exists. *See Adickes v. S.H. Kress & Co.*, 398 U.S. 144, 157 (1970). "While the absence of any genuine dispute of material fact is a precondition for summary judgment, the crux of a summary judgment analysis is whether the movant has established entitlement to judgment as a matter of law." 11-56 MOORE'S FEDERAL PRACTICE - Civil § 56.20 (Matthew

Bender 2014). “In moving for summary judgment against a party who will bear the ultimate burden of proof at trial, the movant may satisfy this burden by pointing to an absence of evidence to support an essential element of the nonmoving party’s claim.” *Gummo v. Village of Depew*, 75 F.3d 98, 107 (2d Cir.1996) (citing *Celotex Corp. v. Catrett*, 477 U.S. 317, 322–23 (1986)), *cert. denied*, 517 U.S. 1190 (1996).

The burden then shifts to the non-moving party to demonstrate specific facts showing that there is a genuine issue for trial. Fed. R. Civ. P. 56(c); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250 (1986). To do this, the non-moving party must present evidence sufficient to support a jury verdict in its favor. *Anderson*, 477 U.S. at 249. “[F]actual issues created solely by an affidavit crafted to oppose a summary judgment motion are not ‘genuine’ issues for trial.” *Hayes v. N.Y. City Dep’t of Corr.*, 84 F.3d 614, 619 (2d Cir. 1996). Summary judgment is appropriate only where, “after drawing all reasonable inferences in favor of the party against whom summary judgment is sought, no reasonable trier of fact could find in favor of the non-moving party .” *Leon v. Murphy*, 988 F.2d 303, 308 (2d Cir. 1993).

The parties may only carry their respective burdens by producing evidentiary proof in admissible form. Fed. R. Civ. P. 56(c)(1)(B). The underlying facts contained in affidavits, attached exhibits, and depositions, must be viewed in the light most favorable to the non-moving party. *United States v. Diebold, Inc.*, 369 U.S. 654, 655 (1962).

Moreover, since Plaintiff is proceeding pro se, the Court is required to construe his submissions liberally, “to raise the strongest arguments that they suggest.” *Burgos v. Hopkins*, 14 F.3d 787, 790 (2d Cir.1994).

Defendant's Motion in Limine to Exclude Expert Testimony of Paul Rubin

At the outset, the Court must decide whether it should consider the expert testimony of Rubin which Baker submitted in opposition to Anschutz's summary judgment motion. Specifically, Anschutz maintains that Rubin "a consistent opponent of all natural gas exploration, performed no scientific work to support his theory of causation." Anschutz' Mem. of Law 5.

However, Anschutz contends that Rubin's testimony is inadmissible pursuant to Federal Rule of Evidence 702. The admissibility of expert testimony in the federal courts is governed principally by Rule 702, which provides in pertinent part as follows:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. Rule 702 embodies a liberal standard of admissibility for expert opinions, representing a departure from the previously widely followed, and more restrictive, standard of *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923). See, e.g., *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 588, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993) (holding that the *Frye* test of general acceptance in the scientific community was superseded by the Federal Rules); *Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 265 (2d Cir. 2002) (observing departure, under Federal Rule, from the *Frye* standard).

The shift under the Federal Rules to a more permissive approach to expert testimony, though, did not represent an abdication of the screening function traditionally played by trial judges. To the contrary, as *Daubert* explained, Rule 702 governs the dis-

strict court's responsibility to ensure that "any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert*, 509 U.S. at 589, 113 S. Ct. 2786. In *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152, 119 S. Ct. 1167, 143 L. Ed. 2d 238 (1999), the Court clarified that, whether a witness's area of expertise was technical, scientific, or more generally "experience-based," Rule 702 required the district court to fulfill the "gatekeeping" function of "mak[ing] certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field."

Daubert enumerated the following factors that, while not constituting a "definitive checklist or test," a district court might consider in evaluating whether a proffered expert opinion has the required indicia of scientific reliability: whether a theory or technique had been and could be tested, whether it had been subjected to peer review, what its error rate was, and whether scientific standards existed to govern the theory or technique's application or operation. *See Daubert*, 509 U.S. at 593–94, 113 S. Ct. 2786. In addition to setting forth these criteria for testing an expert's methodology, the Supreme Court has also stated that reliability within the meaning of Rule 702 requires a sufficiently rigorous analytical connection between that methodology and the expert's conclusions. "[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit*³ of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *General Electric Co. v. Joiner*, 522 U.S. 136, 146,

³ "Ipse Dixit: [Latin 'he himself said it'] . . . Something asserted but not proved <his testimony that she was a liar was nothing more than an ipse dixit>." Black's Law Dictionary (9th ed. 2009).

118 S. Ct. 512, 139 L. Ed. 2d 508 (1997) [(“Nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.”)].⁴ Thus, we have previously stated that “when an expert opinion is based on data, a methodology, or studies that are simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony.” *Amorgianos*, 303 F.3d at 266.⁵

Even after determining that a witness is “qualified as an expert” to testify as to a particular matter, Fed. R. Evid. 702, and that the opinion is based upon reliable data and methodology, Rule 702 requires the district court to make a third inquiry: whether the expert’s testimony (as to a particular matter) will “assist the trier of fact.” We have consistently held, in that respect, expert testimony that “usurp[s] either the role of the trial judge in instructing the jury as to the applicable law or the role of the jury in applying that law to the facts before it,” *United States v. Bilzerian*, 926 F.2d 1285, 1294 (2d Cir. 1991), by definition does not “aid the jury in making a decision”; rather, it “undertakes to tell the jury what result to reach,” and thus “attempts to substitute the expert’s judgment for the jury’s,” *United States v. Duncan*, 42 F.3d 97, 101 (2d Cir. 1994).

In addition to the requirements of Rule 702, expert testimony is subject to Rule 403, and “may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury.” Fed. R. Evid. 403. Indeed, the Supreme Court, echoed by members of our own court, has noted the uniquely important role that Rule 403 has to play in a district court’s scrutiny of expert testimony, given the unique weight such evidence may have in a jury’s deliberations. See, e.g., *Daubert*, 509 U.S. at 595, 113 S. Ct. 2786 (“Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it. Because of this risk, the judge in weighing possible prejudice against probative force under Rule 403 of the present rules exercises more control over experts than over lay witnesses.”) (quoting Jack B. Weinstein, Rule

⁴ See, *General Elec. Co. v. Joiner*, 118 S. Ct. at 519 (“[C]onclusions and methodology are not entirely distinct from one another. Trained experts commonly extrapolate from existing data. But nothing in either *Daubert* or the [FRE] requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion offered.”).

⁵ See also, *Amorgianos*, 303 F.3d at 267 (“The judge should only exclude the evidence if the flaw is large enough that the expert lacks ‘good grounds’ for his or her conclusions.”) (citation omitted).

702 of the Federal Rules of Evidence Is Sound; It Should Not Be Amended, 138 F.R.D. 631, 632 (1991)); *United States v. Young*, 745 F.2d 733, 766 (2d Cir. 1984) (Newman, J., concurring) (noting that “the very breadth of the discretion accorded trial judges in admitting [the expert opinion of a detective testifying as to the criminal nature of a defendant’s activities] under Rules 702 and 403 should cause them to give the matter more, rather than less, scrutiny. A trial judge should not routinely admit opinions of the sort at issue here and should weigh carefully the risk of prejudice.”).

Nimely v. City of New York, 414 F.3d 381, 395–97 (2d Cir. 2005) (footnote omitted).

“The inquiry is a flexible one, and district courts enjoy considerable discretion in deciding on the admissibility of expert testimony.” *United States v. Farhane*, 634 F.3d 127, 158 (2d Cir. 2011) (citations and internal quotation marks omitted).

ANALYSIS

Motion in Limine

The first issue to decide is whether to grant Anschutz’s motion to exclude testimony by Plaintiffs’ expert, Rubin. Anschutz argues that Rubin’s opinion, that the Dow # 1 gas well is the cause of Plaintiffs’ contaminated well water, is: (1) based on speculative assertions as opposed to actual science; (2) disputed by Anschutz’s isotopic testing results, which Rubin ignored; (3) contradicted by the DEC’s explanation, which Rubin also ignored; and (4) beyond the scope of his expertise, since he lacks expertise necessary to give an opinion about the origin of the gas in Plaintiffs’ wells.

Rubin relies on Plaintiffs’ description of the condition of their well water prior to Anschutz’s drilling. As related by counsel in the memorandum of law in opposition to the motion *in limine*, ECF No. 137, Plaintiff Todd’s water has previously been free of sediment for forty-six years, but less than three months after Dow # 1 was shut in, he reported to DEC that his well water had become cloudy, had methane, and black sediment. On October 18, 2010, Plaintiff Ferrell reported to the DEC that their well water had sediment for the first time. Plaintiff Morey reported to the DEC on November 12,

2010, that their well water had become fizzy, milky, and dirty. Other plaintiffs reported similar declines in the quality of their well water following Anschutz's shut-in of Dow # 1.

Rubin conducted inspections of four of the plaintiffs' homes. He took water samples and conducted field parameter measurements of their water supply. He also examined the exposed bedrock in the area and measured the orientation and direction of its joints. Rubin explains that the Horseheads, New York, region is dissected with numerous faults and has a "graben-like structure." However, Rubin's report, dated March 12, 2013, and attached to the Mayo Decl. as Exhibit B, ECF No. 136-4, does not explain what a graben-like structure is, but does refer to "graben faults," *id.* ¶ 19, "faulted graben-like structures," *id.* ¶ 24, and "graben fault planes," *id.* ¶ 25. Rubin's study of the evidence led him to conclude the following:

High methane concentrations found in some Big Flats wells (see Table 3), and not previously observed, to a reasonable degree of scientific certainty, resulted when one or both Dow gas wells, most likely the Dow #1 well, interconnected bedrock fractures and faults with the open boreholes present in homeowner wells. Pathways from gas wells include debonded, channeled and cracked cement sheath and casing material, upward to fractures and faults. Once fracture pathways were opened via the gas installation process, gas migration readily ensued from gas-bearing strata, following available pathways toward release points with lower gas pressures. As long as a source of higher pressure and a release point of lower pressure exist, gas migration will occur – this is the mechanism of gas production. In recognition of this physical fact, gas companies sometimes install gas vents on homeowner wells in some areas to reduce the risk of explosions. Recommendations have been made to Big Flats homeowners to vent their wells. This is particularly important for homeowners with documented high concentrations of natural gas (e.g., Whipple, Condon, McDermott, Brewster). The same pathways that are hydraulically connected to gas wells that provide open avenues for gas migration are also available for migration of natural gas, drilling fluid additives, and naturally-occurring chemicals. Rozell and Reaven (Water Pollution Risk Associated with Natural Gas Extraction from the Marcellus Shale; Risk Analysis, Vol. 32, No. 8, 2012).

Rubin report ¶ 29. Rubin's report does not discuss how drilling the borehole for Dow # 1

interconnected bedrock fractures or faults with Plaintiffs' wells. Additionally, while Rubin examined the faults he could see above ground in the area, he did not identify any particular fault or fracture that resulted in interconnection of Dow # 1 with Plaintiffs' aquifer. "[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146, 118 S. Ct. 512, 519, 139 L. Ed. 2d 508 (1997).

Without explaining how drilling a bore hole, protected by a steel and cement casing, connected the gas at about 10,000 feet with Plaintiffs' shallow wells, Rubin relies on the temporal proximity of the drilling and the water problems. "A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *Id.* Such an analytical gap appears here. Rubin has posited a possible means by which gas could migrate from the deep well to Plaintiffs' water wells, but his conclusion is one at which a lay person could also have arrived by the simple process of relating water well problems to the timing of the gas well drilling. In a supplemental report dated March 14, 2014, ¶ 38, attached to Mulvania Aff. as Exhibit 4, ECF No. 133-6 ("Rubin supplemental report"), Rubin alludes to defects in Anschutz's well casing ("Anschutz . . . [was], no doubt, well aware of casing corrosion potential stemming from moist, CO₂-laced, gas and should have taken appropriate steps. . . ."). However, during his deposition, Rubin confirmed that he did not have sufficient expertise "to say that there was something [Anschutz] should have done but didn't when they constructed [Dow # 1 and Dow # 2]." Rubin dep. 129:25–130:6.

Rubin also theorizes that faults may have allowed the deep well natural gas to seep up into the aquifer. His supplemental report concludes:

It is my opinion that Defendants' gas industry based expert knowledge of symptoms associated with stray gas migration should have been sufficient for them to recognize that gas was escaping upward from Dow # 1 via fractures to the overlying fractured bedrock aquifer tapped by multiple homeowner wells. Failure to take action to stop stray gas migration to homeowner wells was likely a conscious decision, as the only viable means of achieving this would have been to grout the entire open borehole (*i.e.*, the production zone). Naturally occurring fault and joint pathways allowed the upward release of concentrated natural gas (*i.e.*, stray gas) such that it adversely impacted and degraded their well water quality. The unnaturally altered and degraded water quality of the Plaintiffs' water supplies can be rectified by extending and connecting a waterline to their homes. This action will eliminate Plaintiffs' water quality and explosive risk problems which are ongoing at this time.

Rubin supplemental report ¶ 39.

At his deposition, Rubin was asked the following questions and responded with the following answers:

Q. So [Dow # 1 is] nearly 10,000 feet away from the Plaintiffs' homes, measured vertically; right?

A. Right.

Q. And that' almost two miles?

A. Correct.

Q. And over the course of those two miles you don't identify any specific fault, fracture, fissure through which the gas is coming; right?

MR. KUNKLE: Objection, objection.

A. Not a specific one.

Q. You are just saying that it may be coming up some fracture, fault, fissure or network of fractures, faults and fissures?

MR. KUNKLE: Objection.

A. The region is known to be heavily faulted, there are faults present. Whether, I don't know which exact one it is following or which exact joint

set gas follows, the area is recognized as being heavily fractured.

Q. And you made no attempt to try to figure out which fault or fissure it's coming up through?

A. I [sic] would be almost impossible for me to personally do without extensive seismic instrumentation or something like this that's below the ground surface.

Q. Well, you could do that; right?

A. I couldn't personally do it. . . .

Q. You don't consider yourself qualified to use seismic instrumentation in order to identify the precise fault or fissure through which the gas is coming?

A. No, I don't.

Q. And you didn't try in any event; right?

A. No.

Q. And you didn't seek permission or didn't suggest to the Plaintiffs that they seek permission through the litigation process to inject some sort of a dye or tracer into the horizontal portion of the Dow well to see whether it's coming up and, if so, how; right?

A. No, and it was my understanding that I didn't really have the budget to be doing expensive items like this, so no.

Q. But we can agree that would be one way to find out if, in fact, your theory is right?

MR. KUNKLE: Objection.

A. If you can inject a reasonable tracer that might in time make its way up, yes.

Rubin dep. 230:16–231:24. Rubin concludes that “[w]hile the exact lateral and vertical extent of high-angle and strike-slip faulting present is not known, gas migration to Plaintiffs’ wells documents the connection.” *Id.* ¶ 37. This circular reasoning fails to reveal a sufficiently rigorous analytical connection between Rubin’s methodology and his opinion. It is as if he is saying that the temporal proximity of the well water problems to An-

schutz's exploration proves that Anschutz's operations are the cause, and that conclusion is documented by the presence of natural gas in Plaintiffs' water wells.

Rubin's conclusion fails to adequately address the isotropic test results showing that the gas in Plaintiffs' wells was different from the gas in the depths of Dow # 1. Anschutz's experts, Hinchey and Donald, concluded in an April 5, 2013, report entitled "Big Flats Groundwater Investigation," attached to Mulvania Aff. as Exhibit 7, ECF No. 133-9, that,

Methane in the Plaintiffs' wells comes from the same geologic formation from which they pump ground water. This conclusion is confirmed by isotopic fingerprinting using chemical methods and from noting that the wells in the Smith Valley Development were installed with venting systems because local well drillers were aware of the presence of gas as much as 50 years ago when they drilled the wells.

Big Flats Groundwater Investigation ¶ 3. That report also points out that, "[t]he DOW wells were not hydraulically fractured, so there was no 'outward' pressure placed on the geologic formation capable of moving gas away from the wells." *Id.* ¶ 7. The same report also states,

The natural gas in the Black River formation has been trapped for millennia and cannot move upwards through the thousands of feet of shale and the impermeable salt layers of the Salina Group. Second, the DOW well bores constitute the lowest pressure (head) point in the Black River formation. Water, gas and other fluids in the Black River formation, and in any hydraulically connected zones above it, will flow towards the DOW wells, not away from them. Third, cement placed between the well and the formation, installed and tested in the presence of a New York State regulatory official, seal off shallow permeable zones that produce potable water. And, fourth, isotopes show that the natural gas in Plaintiffs' wells is not remotely associated with the natural gas from the Black River formation. Gas from either the Black River formation or the known gas in shallower formations near the DOW wells could not move almost half a mile to the east but, rather, would move to the north because of the law of buoyancy.

Id. The Big Flats Groundwater Investigation also documents natural gas in wells in the area as early as the 1960s and fires resulting from natural gas in area well water in the

1980s. As of 1990, 150 houses were drawing water from the aquifer. *Id.* at 2-1.

Rubin's two reports do not address the isotopic testing. At his deposition, he was asked the following questions and gave the following responses:

Q. Now, you are aware there is a lab called GeoMark that did [isotopic testing]?

A. I am aware of that. I saw the diagram that showed up.

Q. But you disregard that?

A. I disregard it because I very much doubt that it adequately addresses all the geochemistry and the mixing phenomenon that likely occurred along the way, mixing of different gas-rich formations.

Q. Now, there was another entity that also did isotopic testing, right? Are you aware of that?

A. Yes.

Rubin Dep. 306:17–307:10. At this point in the deposition, counsel marked the report from Isotec, which was attached to a letter from the Chemung County Executive and addressed to Thomas Whipple. *Id.* 307:13–16. At the deposition, the letter and its attachment were referred to as Exhibit 10. Both are filed as Exhibit 8 to the affidavit of Michael N. Mulvania, ECF No. 133-11. Rubin was then questioned about the Isotec report:

Q. Now, you don't cite Exhibit 10 [the Isotec report] in either of your two reports, do you?

A. No, I don't.

* * *

Q. So why didn't you cite that in your [sic] either of your two reports?

A. Uh, because I view it as not likely incorporating mixing phenomenon that should be more adequately assessed by a chemist.

Q. Well, you are not competent to do that work; right?

A. We've established that.

Q. And you are not competent to criticize Isotech's work here; right?

A. That's right.

Q. So what you did in your two reports is you ignored it; right?

A. I didn't have reason to believe that it was thoroughly comprehensive. I didn't believe that it allowed for the variability I saw in the data and some of the high concentrations of methane and it was my opinion that mixing phenomenon are not adequately taken into account with this work.

Q. So you just disregarded it rather than grapple with it. And you didn't say any of that in your report.

A. I didn't.

Q. Right?

A. I did not.

Q. You didn't say, hey, there's this test from Isotech, it's no good because of what you just testified to on the record; right?

A. That's right. That's not in my affidavit.

Q. Neither of your two affidavits says a word about what you just testified to, right?

A. No, they don't.

Rubin Dep. 308:3–310:23. At the deposition, counsel then marked the GeoMark report as Exhibit 11, which is included as Exhibit 14 to the affidavit of Michael J. Guzman, ECF No. 132-17. Ruben was then asked the following questions and made the following responses concerning the GeoMark isotopic testing report:

Q. Have you seen Exhibit 11 [the GeoMark report] before?

A. I believe I have, although I think this is a lot cleaner copy than what I've seen.

Q. Can we agree that you don't mention any of the data or analysis from Exhibit 11 in either of your two reports?

A. We can agree on that.

Q. And you certainly didn't hold it out there and then debunk it, explaining why it's wrong or off base or irrelevant; right?

A. No, I didn't.

Q. And we can agree that you are not competent to criticize the test results and the analysis from GeoMark; right?

A. I am not a chemist. . . .

Q. This shows the chemical composition of all the gas that was encountered along the way; right?

A. Right, at the depths as stated.

Q. Depths times, then it shows methane, ethane, propane and a whole variety of other constituents; right?

A. Correct.

Q. So this tells you what was existing in a state of nature as Anschutz was drilling downwards; right?

A. At these intervals.

Q. You didn't bother to grapple with any of this in your reports?

A. No, I did not.

Q. Is this completely irrelevant to your conclusions in your view?

A. Not completely irrelevant. It may have more relevance than I have given it. . . .

Q. [Y]ou keep talking about all this mixing that you believe is going on, what have you done to figure out whether there is mixing going on?

A. I've done nothing.

Q. So that's just speculation?

MR. KUNKLE: Objection.

A. Based on the physical setting I think it's—I think it's not idle speculation. I think it's completely reasonable based on the physical setting and the pathways that gas migration would occur and the fact that that gas or gases would—would be commingling through different formations.

Q. Well, central to your guess that mixing is happening is your assumption that gas is coming up all the way from the Trenton-Black River; right?

A. Right.

Q. But you have done nothing to figure out whether, in fact, that's true; right?

A. Other than look at the physical setting where I think things have changed substantially enough to, uh, to argue for that, yes.

Q. The physical setting hasn't changed at all. All the layers that have existed for eons are still there.

A. Right, the change in the setting is the Dow well installation.

Q. Okay. There were a lot of different ways you could try to figure out if, in fact, Black River gas is in the Plaintiffs' wells; right?

A. I guess ideally what I would have done is I would have consulted a chemist and during your drilling operation down to great depths I would have put in some sort of a company-specific tracer and then if that came out in Plaintiffs' wells then we wouldn't have to argue about whether it's chemically mixed or whether it has a signature or not because we would just know it.

Q. You could have done that but you didn't do that; right?

A. I did not.

Rubin Dep. 311:6–24; 314:20–315:15; & 317:6–319:8.

Exercising its gate keeping function, the Court determines that, considering his reports and his deposition testimony, Rubin's testimony at trial would not be based upon sufficient facts or data, would not be the product of reliable principles and methods, and that, in any event, Rubin has not applied the principles and methods reliably to the facts of the case. Therefore, his testimony would not be admissible. Fed. R. Evid. 702. Anschutz's motion *in limine* is granted.

Summary Judgment

Anschutz also seeks summary judgment arguing that Plaintiffs cannot show that “Dow # 1 caused the alleged contamination in their water wells,” and “that the alleged contamination has or will likely cause adverse health effects in Plaintiffs.” Anschutz Mem. of Law 6, Sept. 5, 2014, ECF No. 132-2.

The Court agrees with Anschutz that Plaintiffs must show causation to recover on their claims. Plaintiffs’ evidence that Anschutz caused methane contamination of their water wells, and that methane contamination led to iron and manganese in the water, is based on the report of their expert, Rubin. However, as indicated above, the Court has found that Rubin is not qualified to testify as to causation. Rubin concluded that,

The faulted graben-like structures (Exhibit 3) sought by Anschutz for their now documented high natural gas content can extend laterally for miles and *almost certainly* extend upward through the bedrock subsurface into the freshwater aquifer. While the exact lateral and vertical extent of high-angle and strike-slip faulting present is not known, gas migration to Plaintiffs’ wells documents the connection.

Rubin Supplemental Report ¶ 37 (emphasis added). Plaintiffs’ counsel conceded at oral argument that without Rubin’s testimony, the Plaintiffs would be unable to prove causation.

However, even if Rubin was qualified to testify in this case, he merely speculates that deep well gas has migrated up through as yet unidentified fissures or faults into the same rock formations, thousands of feet away from Plaintiffs’ water wells:

Q. Now, you saw there are all these known graben faults and yet to date in this litigation, even though you have been paid nearly \$10,000, you haven’t identified the fault through which this gas is traveling: right?

A. Not the exact pathway, no.

Q. You are just saying it’s there because and you know it’s there because gas is now in the Plaintiffs’ wells?

A. It's a fault zone, some interconnected fracture network that's surfaced, yes. It's interconnected, the pathway is somewhat tortuous. Do I or you know the exact pathway of the fault? No.

Rubin Dep. 402:14–403:5. His speculation about gas mixing is unsupported by the isotopic testing conducted by the county health department. Rubin conceded at his deposition that neither of his reports discussed the data or analysis from the isotopic tests, and that he was not competent to criticize the isotopic test results and analysis from GeoMark because he was not a chemist. Rubin Dep. 311:11–24. As the Seventh Circuit pointed out, “[a]n opinion that comes for the first time at the expert deposition is untimely.” *Ciomber v. Coop. Plus, Inc.*, 527 F.3d 635, 642 (7th Cir. 2008). In *Ciomber*, the Seventh Circuit wrote:

Rule 26(a)(2) does not allow parties to cure deficient expert reports by supplementing them with later deposition testimony. The purpose of Rule 26(a)(2) is to provide notice to opposing counsel—before the deposition—as to what the expert witness will testify, see *Sherrod v. Lingle*, 223 F.3d 605, 613 (7th Cir.2000); *Salgado v. General Motors Corp.*, 150 F.3d 735, 741 n. 6 (7th Cir.1998), and this purpose would be completely undermined if parties were allowed to cure deficient reports with later deposition testimony. Allowing parties to cure a deficient report with later depositions would further undermine a primary goal of Rule 26(a)(2): “to shorten or decrease the need for expert depositions.” *Salgado*, 150 F.3d at 741 n. 6. After all, the parties’ need for expert depositions would increase if they could use deposition testimony to provide information they should have initially included in their Rule 26(a)(2) report.

Ciomber, 527 F.3d at 642.

Rubin’s speculation is not sufficient to establish causation. See *In re Agent Orange Product Liability Litigation*, 818 F.2d 187, 193 (2d Cir. 1987) (“A court addressing a motion for summary judgment based on the military contractor defense must thus look to the weight of scientific evidence in determining the existence of a hazard triggering the duty to inform. The hazard cannot be established by mere speculation or idiosyncratic opinion, even if that opinion is held by one who qualifies as an expert under Fed.

R. Evid. 702.”). “Choosing one explanation over another without more evidence is a matter of speculation. . . .” *Cameron v. Community Aid For Retarded Children, Inc.*, 335 F.3d 60, 65 (2d Cir. 2003).

Anschutz’s experts distinguished among bacterial gas, such as forms in one’s intestines, or in a swamp, from gas produced by high pressure and heat acting on deposits of coal and oil. He explained:

Methane forms by three processes: 1) microbial fermentation of organic matter (e.g. methane produced in warm blooded animal intestines (flatuluous) and shallow wetland soil (swamp gas); 2) bacterial reduction of dissolved carbon dioxide to methane in deep wetland soils and landfills; and 3) thermogenic conversion of organic material to natural gas (methane) associated with hydrocarbon deposits of coal and oil. Thermogenic methane forms when heat and pressure “pressure-cooks” ancient organic matter buried many thousands of feet deep beneath the Earth’s surface.

Thermogenic methane is isotopically unique from the two other forms of bacterial methane.

Big Flats Groundwater Investigation 6-6–6-7. Rubin’s opinion is based solely on the temporal proximity of Plaintiffs’ complaints and the drilling of Dow # 1.

“It is well settled that a causation opinion based solely on a temporal relationship is not derived from the scientific method and is therefore insufficient to satisfy the requirements of Fed. R. Evid. 702.” *Schmaltz v. Norfolk & Western Ry. Co.*, 878 F. Supp. 1119, 1122 (N.D. Ill. 1995). See also *Daubert II*, 43 F.3d at 1319 (agreeing with Sixth Circuit’s observation regarding testimony of medical expert whose conclusions were based upon timing of ingestion of drug by plaintiffs: “Dr. Palmer offers no tested or testable theory to explain how, from this limited information, he was able to eliminate all other potential causes of birth defects.... Personal opinion, not science, is testifying here.”); *Cavallo v. Star Enter.*, 892 F. Supp. 756, 773 (E.D.Va.1995), *aff’d in relevant part*, 100 F.3d 1150 (4th Cir. 1996) (stating that temporal relationship combined with subjective belief that causation is possible “is not the method of science”).

Awad v. Merck & Co., Inc., 99 F.Supp.2d 301, 304 (S.D.N.Y. 1999).

Anschutz has shown that Plaintiffs will be unable to meet their burden of showing that Dow # 1 caused methane infiltration into their wells. Without that critical proof, none of their claims can survive.

CONCLUSION

For the foregoing reasons, Anschutz's two applications, ECF No. 132 seeking summary judgment, and ECF No. 133 motion *in limine*, are granted. Paul Rubin's expert testimony is excluded, and the Clerk is directed to enter summary judgment for defendant Anschutz.

IT IS SO ORDERED.

Dated: December 17, 2014
Rochester, New York

/s/ Charles J. Siragusa
CHARLES J. SIRAGUSA
United States District Judge