IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

UNITED STATES OF AMERICA and STATE OF NEW MEXICO ex rel. STATE ENGINEER, Plaintiffs, and ZUNI INDIAN TRIBE, NAVAJO NATION, Plaintiffs in Intervention, v. A & R PRODUCTIONS, et al., Defendants.	)	No. 01-cv-0072-MV/WPL ZUNI RIVER BASIN ADJUDICATION **Subfile No. ZRB-2-0038**

MOTION TO EXCLUDE EXPERT OPINION TESTIMONY

Pursuant to Fed. R. Evid. 702 and the standards for expert testimony articulated by the Supreme Court in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), the United States moves for entry of an order excluding any expert opinion testimony from Craig Fredrickson in support of *Defendants' Motion for Summary Judgment*, Doc. 3305 ("SJ Motion") and, if necessary, at trial. Defendants Craig and Regina Fredrickson ("the Fredricksons") have identified Mr. Fredrickson pursuant to Fed. R. Civ. P. 26(a)(2) as their expert witness.

In support of the SJ Motion, the Fredricksons seeks to enter Mr. Fredrickson's expert opinions on the historical beneficial use of groundwater pumped to support a cow-calf operation despite the fact that Mr. Fredrickson has never testified as an expert witness in any litigation before, has never published any books or peer-reviewed articles on any relevant topics at issue

here, has no relevant academic training in the agricultural sciences, has only made himself familiar with the relevant topics for the specific needs of this proceeding, has never worked in the agriculture industry, and has never owned or raised cattle. And even if Mr. Fredrickson were to qualify as an expert, his opinions lack the level of reliability typically required of expert testimony. As explained in the Memorandum of Points and Authorities that follows, this Court, in fulfilling its gatekeeping function under Rule 702 and *Daubert* should exclude Mr. Fredrickson's testimony. The Fredricksons have not met their burden to show either that Mr. Fredrickson is qualified to render expert opinions on the relevant topics, or that his opinions would constitute reliable expert testimony.

MEMORANDUM OF POINTS AND AUTHORITIES

I. BACKGROUND

The Fredricksons own 640 acres in Section 19, Township 5N, Range 18W, N.M.P.M., within the Zuni River basin ("the Property"). This section of land was historically one of roughly 140 sections encompassing a former ranch. (Expert Witness Report of Craig L. Fredrickson, June 27, 2016, Exhibit A [hereinafter "F. Report"] at 5.) This ranch was established by the Cox family in the 1920s and supported a cow-calf operation until approximately 2000. (*Id*. at 5, 9.) All of the private land within the former ranch was subdivided over time and sold by 2000. (*Id*. at 11.) The Fredricksons purchased the Property in 2006 from Ron and Claire Demaray. (Deposition of Craig L. Fredrickson, July 6, 2016, Exhibit B [hereinafter "F. Depo."] at 26:6-9; 27:12-14.)

The Rincon-Hondo Well ("well 10A-5-W06"), a windmill and pump-jack powered stock well originally drilled in 1955 by the Cox family, located in the NE¼NW¼ of Section 19, is the Fredrickson's sole source of water on the Property. (F. Report, Ex. A at 5-6; 8; 11.) Historically,

well 10A-5-W06 was used to water cattle ranging within the former ranch. (*Id*. at 5.) The High Lonesome Well, the Amado Well, the Rincon Camp Well, the Perry Canyon Well and the Zuni Spring, along with well 10A-5-W06, were the watering sources for cattle within the broader region of the Property (a sub-area of the larger ranch). (Deposition of Tom Cox, May 18, 2016, Exhibit C [hereinafter "Cox Depo."] at 31:21-32:9.) Well 10A-5-W06 has not been used to water livestock since the Cox family subdivided the ranch. (F. Depo., Ex. B at 27:8-14; 28:3-6; 32:2-5.) As the Court is aware, the parties dispute the quantity of the livestock use water right associated with the well.

Mr. and Mrs. Fredrickson carry the burden of establishing their water rights associated with well 10A-5-W06. *See, e.g.*, *Order*, No. 01cv00072-MV-WPL, Subfile No. ZRB-2-0098, Doc. 2985 at 4 (Aug. 28, 2014). Mr. and Mrs. Fredrickson seek to support their livestock use claim by presenting the expert opinions of Mr. Fredrickson, as described in the June 27, 2016 version of his expert report, attached as Exhibit A[1] Mr. Fredrickson claims, "[w]ith a reasonable degree of scientific certainty, [that] the maximum amount of groundwater diverted through well 10A-5-W06 for the beneficial purpose of livestock watering was 3.779 acre-feet per annum." (*Id*. at 5.) To reach this ultimate conclusion, Mr. Fredrickson seeks to opine in an expert capacity on the following subjects: how a cattle rancher would act to obtain long-term profitability (*id*. at 15); when the cattle's watering source may be considered unreliable or insignificant (*id*. at 22); the distance from a water source cattle forage (*id*. at 22); the path cattle would take between two geographical points (*id*. at 23); how to set an appropriate stocking rate of cattle (*id*. at 24); how to

[1] The June 27, 2016 version of Mr. Fredrickson's report is the third, and final, such version submitted. Mr. Fredrickson's conclusions and analysis changed with each respective report.

calculate available forage (*id.* at 25); how to determine the appropriate forage utilization rate (*id*. at 32); cattle foraging behavior (*id*. at 39); the appropriate daily water intake rates of cattle (*id*. at 41-42); the nutrient and water requirements of calves (*id*. at 45); the amount of water that spills from a cow's mouth when drinking (*id*. at 55); appropriate ranch maintenance practices (*id*. at 56); and how wildlife and cattle share water sources (*id*. at 67) (hereinafter these subject areas are collectively referred to as "Cattle Operations").

Mr. Fredrickson is a retired nuclear engineer who has lived in Albuquerque, New Mexico since 1979. (*See* F. Report, Ex. A at 119-21; F. Depo., Ex. B at 9:4-7.) Mr. Fredrickson received his bachelor's degree in Nuclear Engineering from Pennsylvania State University in 1973 and has not taken any graduate coursework for credit. (F. Depo., Ex. B at 13:1-16.) He does not currently own or water any livestock on the Property, nor has he ever owned or managed livestock. (*Id*. at 32:2-5; 36:4-7.) The United States seeks to exclude Mr. Fredrickson's testimony as inadmissible under Fed. R. of Evid. 702 because Mr. Fredrickson is not a qualified expert in Cattle Operations. Alternatively, were the Court to find Mr. Fredrickson a qualified expert in Cattle Operations, the Court should nevertheless exclude his opinions as unreliable.

II. ADMISSIBILITY OF EXPERT TESTIMONY

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert testimony:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. The rule "imposes on the district court a gatekeeper function to 'ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable."' *United States v. Gabaldon*, 389 F.3d 1090, 1098 (10th Cir. 2004) (quoting *Daubert*, 509 U.S. at 589). This gatekeeper function requires a two-step inquiry: "In determining whether expert testimony is admissible, the district court generally must first determine whether the expert is qualified 'by knowledge, skill, experience, training, or education' to render an opinion." *United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009) (quoting Fed. R. Evid. 702). "Second, if the expert is sufficiently qualified, the court must determine whether the expert's opinion is reliable by assessing the underlying reasoning and methodology, as set forth in *Daubert*." *Id*.

In the SJ Motion, the Fredricksons rely entirely on Mr. Fredrickson's expert opinion testimony to argue that they are entitled to a water right of 3.779 acre-feet per annum for livestock watering for well 10A-5-W06. *See* SJ Motion at 9 (Factual Assertion 7). As the proponents of Mr. Fredrickson's expert testimony, the Fredricksons bear the burden of establishing, first, that he is a qualified expert in the subject matter, *Ralston v. Smith & Nephew Richards, Inc.*, 275 F.3d 965, 970 n.4 (10th Cir. 2001), and second, that this expert testimony is admissible. *Nacchio*, 555 F.3d at 1241. The Fredricksons must make both of these showings "by a preponderance of proof." *Daubert*, 509 U.S. at 592 n.10 (citation omitted). Against this standard, Mr. Fredrickson's expert opinions are not admissible evidence under Rule 702.

III. ARGUMENT

A. THE FREDRICKSONS HAVE NOT ESTABLISHED THAT MR. FREDRICKSON IS A QUALIFIED EXPERT IN CATTLE OPERATIONS

Mr. Fredrickson does not possess the expertise required under Rule 702 to qualify him as an expert on the subject of Cattle Operations. Mr. Fredrickson asserts:

> I have both the personal, site-specific knowledge of the land and its improvements, and the qualifications, by virtue of my skills, experience, training and education, to assess the historic beneficial use of well 10A-5-W06 for livestock watering.

(F. Report, Ex. A at 4). Mr. Fredrickson's own estimation of his expert qualifications is not sufficient to meet his burden, for the "trial court's gatekeeping function requires more than simply 'taking the expert's word for it.'" *Nacchio*, 555 F.3d at 1258 (quoting Rule 702 advisory committee note (2000)).

To qualify as an expert, a proposed witness must possess "such skill, experience or knowledge in that particular field as to make it appear that his opinion would rest on substantial foundation and would tend to aid the trier of fact in his search for truth." *LifeWise Master Funding v. Telebank*, 374 F.3d 917, 928 (10th Cir. 2004) (citation omitted). An expert who "possesses knowledge as to a general field" but "lacks specific knowledge does not necessarily assist the [trier of fact]." *City of Hobbs v. Hartford Fire Ins. Co*., 162 F.3d 576, 587 (10th Cir. 1998). Therefore, proposed expert testimony must fall "within the reasonable confines of [the witness's] expertise." *Conroy v. Vilsack*, 707 F.3d 1163, 1169 (10th Cir. 2013).

Mr. Fredrickson lacks the kind of expertise in Cattle Operations that Rule 702 and *Daubert* require. By his own admission, Mr. Fredrickson has not received any formal education or training in the subject matter, has never rendered professional opinions on this subject matter, and does not have any experience in this subject matter. Instead, Mr. Fredrickson seeks to establish his expert credentials on the basis of personal observations and his review of the literature on the subject. Rule 702's admissibility standard is not satisfied by such bare assertions. The gatekeeping function demands more.

1. Mr. Fredrickson Does Not Have Any Education or Training in Cattle Operations.

In *LifeWise Master Funding*, the Tenth Circuit considered a proposed expert's formal field of education and training to determine whether the particular subject matter of the expert's proposed testimony fell within the reasonable confines of his expertise. There, the CEO of LifeWise was proposed as an expert to explain a damages model of the company's lost profits, but had only taken one class in economics, had not taken a single class in accounting or finance, and had no training in damages analysis. The court affirmed the district court ruling that the CEO was not a qualified expert. 374 F.3d at 928 ("he took no accounting or finance courses, had no training in damage analysis, had never testified as a damages expert or prepared an expert damages report, had never taught a course or lectured on damages, and has never been published in the field").

Here, Mr. Fredrickson has not taken a single course in the agricultural sciences (F. Depo., Ex. B at 13:5-12), much less completed a course of study in this field (F. Report, Ex. A at 119).[2] Mr. Fredrickson conceded that he has never received any certifications or formal education in the areas of cattle management, land management, range ecology, or wildlife biology. (F. Depo., Ex. B at 61:20-24.) Rather, Mr. Fredrickson contends that his degree in nuclear engineering and subsequent career training in nuclear engineering qualifies him generally as an expert on "conducting technical analysis based upon published data on a wide variety of issues." (*Id*. at 47:10-11.) Mr. Fredrickson asserts that the nature of his education and training allows him "fundamentally, to look at complex and sometimes simple processes and do the math." (*Id*. at

[2] The agricultural sciences program at Texas A&M University requires coursework in animal science, plant & soil science, agricultural systems, agricultural economics, wildlife, range, and ecology. TEXAS A&M UNIVERSITY, DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS, http://alec.tamu.edu/academics/undergraduate/agricultural-science-agsc/ (last visited Sept. 12, 2016).

50:12-13.) "In other words, look at given X and given Y what is C." (*Id*. at 50:13-14.) The Tenth Circuit, however, has rejected such bootstrapped claims of expertise, even in cases where the putative expert actually possessed relevant education and training. *See Ralston*, 275 F.3d at 970 ("merely possessing a medical degree is not sufficient to permit a physician to testify concerning any medical-related issue"); *Ronwin v. Bayer Corp*., 332 Fed. Appx. 508, 512-13 (10th Cir. 2009) (surgeon with extensive orthopedic surgery experience not an expert in causal connection between taking a pharmaceutical drug and plaintiff's shoulder injury given the surgeon's lack of practical experience and training with respect to the drug).

Indeed, Mr. Fredrickson's definition of his own expertise would allow him to adapt this expertise to any issue requiring "technical analysis," simply by "mak[ing] himself familiar with publications and data … relevant to the topic." (F. Depo., Ex. B at 47:10-15.)

> Q: So in your field of nuclear engineering it's an involved and complex field, correct? I mean, it's what you just described?
>
> A: Correct.
>
> Q: And in your profession you were presented with numerous problems and situations that you had to apply your expertise and solve problems for your clients or employer?
>
> A: That's correct.
>
> Q: And you brought those skills to bear on in this case, generally speaking?
>
> A: That's true.
>
> Q: You could bring them to bear in this case or in another case of some unrelated field, whether it be medicine or industry or environment or what have you, you can bring these skills as an engineer to bear; right?
>
> A: Theoretically, yes.

(*Id*. at 50:15-51:7.)

Mr. Fredrickson thus claims that his education and training in nuclear engineering, which provided him with skills in "conducting technical analysis based upon published data" (*Id*. at 47:10-11), qualifies him as an expert in Cattle Operations. No plausible reading of Rule 702, *Daubert*, or its progeny supports Mr. Fredrickson's claimed expertise for purposes of this case.

2. Mr. Fredrickson Has Never Rendered a Professional Opinion on Cattle Operations.

Whether a proposed expert witness has published, researched, or taught in the given subject matter is another factor in determining the reasonable confines of an expert's area of expertise. *Conroy*, 707 F.3d at 1168-69. Also relevant to the proposed expert's qualification is whether these manifestations of expertise occurred before the subject litigation began, or were initiated only in conjunction with the litigation. *Id*. When a doctor with a Ph.D. in business and twenty-five years of experience in the areas of human-resource management and organizational behavior proposed to testify as an expert about sex stereotyping, the Tenth Circuit affirmed a district court's determination that sex stereotyping was not within the reasonable confines of the doctor's expertise. *Id*. The doctor had previously testified as an expert in cases involving age discrimination, sexual harassment, and wrongful termination. *Id.* at 1169. Despite this, the *Conroy* court held that, because the doctor had never researched or written about sex stereotyping specifically and had become familiar with the topic only after being retained for the case, the district court did not err when it found the doctor to be unqualified as an expert in the area.[3] *Id.* at 1168-69.

[3] The district court reasoned that "if gender stereotyping were part of [the doctor's] subject area, the court would expect to find some indication that [the doctor] had either researched, opined, or written about

Here, Mr. Fredrickson has never formulated opinions on Cattle Operations in any capacity outside the scope of this litigation (F. Depo., Ex. B at 55:3-5; 61:4-6), much less taught or been published in the field (*Id*. at 61:7-19). To whatever extent Mr. Fredrickson has researched and made himself familiar with Cattle Operations, he has done so only for his self-interested needs in this litigation. (*Id*. at 54:3-6; 55:3-5.) That Mr. Fredrickson cannot point to any circumstance whatsoever where his "expertise" in Cattle Operations has been displayed outside the context of this litigation demonstrates his lack of expertise in the subject matter for purposes of Rule 702. *Compare*, *Milne v. USA Cycling Inc*., 575 F.3d 1120, 1133 (10th Cir. 2009) (that police officer had never published any articles about bicycle racing was factor considered to conclude that standard of care for mountain bike racing was not within the reasonable confines of police officer's expertise) and *Ronwin*, 332 Fed. Appx. at 513 (orthopedic surgeon's lengthy departure from active research, publication, and teaching were factors considered) *with*, *Poche v. Joubran*, 389 Fed. Appx. 768, 773 (10th Cir. 2010) (surgeon who had written on abdominal trauma, encountered six to twelve abdominal injuries a year, and regularly made decisions whether to operate on abdominal injuries was a qualified expert to testify on the standard of care for deciding whether to undergo an abdominal procedure).

3. Mr. Fredrickson Has No Experience in Cattle Operations.

When a proposed expert witness relies on his experience in a particular subject matter to establish his expert qualification, the district court should consider the relevance and breadth of that experience. *United States v. Medina-Copete*, 757 F.3d 1092, 1105 (10th Cir. 2014). In

gender stereotyping in the past." *Conroy v. Johanns*, No. 2:06-CV-867-CYY, 2011 WL 839857, at *3 (D. Utah Mar. 17, 2011).

Medina-Copete, the proposed expert's qualification to provide testimony on the connection between religion and drug trafficking was based primarily on his experience as a police officer and information he had gathered from conducting personal research and his personal visits to religious shrines. *Id*. at 1104-05. The district court found the witness competent to testify as an expert on this subject. *Id*. at 1104. The Tenth Circuit reversed, concluding that the district court did not properly consider the "relevance or breadth of [the expert witness'] experience." *Id.* at 1104-05. The appeals court concluded that the purported expert's self-study from "observations of such [religious] icons in narcotics cases, his four or five trips to Mexico, and his self-published materials and training seminars on the subject" was not enough to qualify him as an expert on the subject. *Id.* (internal citations omitted).

Here, Mr. Fredrickson claims expert status notwithstanding a complete lack of any relevant experience with Cattle Operations. Like the police officer in *Medina-Copete*, Mr. Fredrickson relies on his "personal, site-specific knowledge of the land and its improvements" (F. Report, Ex. A at 4) "by virtue of being on the land for ten years" (F. Depo., Ex. B at 47:19-22). This self-described experience is not enough to meet the Fredricksons' burden, especially considering that Mr. Fredrickson has never grazed cattle on the Property (*see id*. at 32:2-5; 34:22-24), has never managed a cattle operation of any kind, at any time (*id*. at 36:4-7), and has never owned a livestock use water right (*id*. at 19:4-8).

Mr. Fredrickson's experience as a nuclear engineer around nonreactor nuclear facilities is no adequate substitute for his lack of practical experience in Cattle Operations. As *Medina-Copete* demonstrates, the Tenth Circuit requires a tight fit between the field in which an expert has obtained experience and the subject matter on which a proposed expert seeks to opine. *See*

757 F.3d at 1104-05; *see also Milne*, 575 F.3d at 1133. In *Milne*, a police officer who had experience organizing and supervising paved road bike races was not qualified as an expert witness on the standard of care in mountain bike races. 575 F.3d at 1133. The court reasoned that because the rules and practices that prevail in paved bicycle races differ from those that govern mountain bike races, the police officer's experience with the former was not sufficient to quality him as an expert with regard to the latter. *Id.* at 1134-35.

Mr. Fredrickson's career experience as a nuclear engineer analyzing nuclear facility safety, radioactive mixed waste risk assessment, and regulatory compliance may qualify him as an expert in nuclear facility safety, radioactive mixed waste risk assessment, and regulatory compliance, but it does not qualify him as an expert in Cattle Operations. (F. Report, Ex. A at 120.) Unlike the seemingly minor differences between paved bicycle racing and mountain bike racing in *Milne*, the gulf is broad between Mr. Fredrickson's experience as a nuclear engineer in nuclear facility safety and calculating the historical beneficial use of water from a stock well to supply a now long-ceased cow-calf operation. Indeed, the subjects are only relatable—if they are relatable at all—on a purely abstract level. Practically speaking, Mr. Fredrickson's career experience has imbued him with no expertise in Cattle Operations. Whatever expertise Mr. Fredrickson may have, it is not in Cattle Operations. Personal observations leavened with personal research into the subject matter of ongoing litigation do not meet the requirements of expert witness qualification under Rule 702. The Court should not allow Mr. Fredrickson to opine as an expert.

B. EVEN IF MR. FREDRICKSON WERE A QUALIFIED EXPERT, HIS OPINIONS WOULD BE INADMISSIBLE BECAUSE THEY LACK THE RELIABILITY REQUIRED OF EXPERT TESTIMONY

Once a trial court determines that a proposed expert witness is qualified to testify in that capacity, the court still must ensure the reliability of expert testimony. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999). The Supreme Court has interpreted Rule 702 to impose an evidentiary standard of admissibility where a district court may determine that an expert's proposed testimony is not reliable if it is not derived by a scientifically valid methodology or if its conclusions contain analytical gaps. *Daubert*, 509 U.S. at 589-90 ("The subject of an expert's testimony must be 'scientific … knowledge.'") (quoting Rule 702); *see also Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997) ("conclusions and methodology are not entirely distinct from one another … [a] court may conclude that there is simply too great an analytical gap between the data and the opinion proffered"). Mr. Fredrickson's expert testimony suffers from both infirmities.

1. Mr. Fredrickson's Expert Opinions Are Not Based Upon a Scientifically Valid Methodology

Rule 702 states that an expert witness' opinions must be based on "the expert's scientific, technical, or other specialized knowledge ..." Fed. R. Evid. 702. The *Daubert* court interpreted "scientific" as used in Rule 702 to imply that an expert's proposed testimony must be grounded in "the methods and procedures of science." 509 U.S. at 590; *see also Joiner* 552 U.S. at 146-47 (holding that the *Daubert* reliability standard is applied to all "scientific," "technical," or "other specialized" knowledge, not just "scientific" matters only). The *Daubert* court listed four non-exclusive factors that a district court may consider when assessing the reliability of an expert's methodology. *Id.* at 592-93. These factors are: "(1) whether a theory has been or can be tested or falsified, (2) whether the theory or technique has been subject to peer review and publication, (3) whether there are known or potential rates of error with regard to specific techniques, and (4)

whether the theory or approach has 'general acceptance.'" *Bitler v. A.O Smith Corp.*, 400 F.3d 1227, 1233 (10th Cir. 2004) (summarizing *Daubert* factors). Other courts have identified additional factors that signal the unreliability of expert testimony. *See Kumho Tire*, 526 U.S. at 150 ("*Daubert's* description of the Rule 702 inquiry [is] a flexible one … *Daubert* makes clear that the factors it mentions do *not* constitute a "definitive checklist or test") (emphasis original) (citation omitted). These additional factors, which we discuss in turn below, inquire: (5) whether an expert has cherry-picked from the available data, (6) whether an expert has formed his opinions for the purposes of the present litigation, and (7) whether an expert's opinions contain impermissible analytical gaps from the data, or are not supported at all. The relevance and weight of any given factor as an indicator of unreliability varies depending on the specific nature of the testimony to be presented in a particular case. *Kumho Tire*, 526 U.S. at 150. When measured against any of these factors, the Fredricksons have failed to demonstrate that Mr. Fredrickson's opinions contain any of the accepted indicia of reliability.

a. Mr. Fredrickson offered no evidence of testing and verification in support of his opinions.

First, "a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested." *Daubert*, 509 U.S. at 593. At first blush, Mr. Fredrickson claims to "[t]est all statements or assertions, verbal or written, to ensure that they are credible." (F. Report, Ex. A at 3.) Yet upon closer examination, Mr. Fredrickson has not supplied evidence that *any* of the techniques he employs to reach his conclusions or any of the publications he relies on in his analysis have been personally or independently tested, much less that *all* of these techniques have been tested. As an example, for the conclusion that cattle spill 10% of the water they drink, Mr. Fredrickson

relied on "visual observation of cows drinking" to conclude that "I assumed—it looks to me about 90 percent of that water goes down the hatch." (F. Depo., Ex. B at 127:10-17.) Mr. Fredrickson did not take any steps to test this analysis (*id*. at 127:5-23), nor did he cite to any publication which performed a similar test to validate his conclusion (*see* F. Report, Ex. A at 55). To the extent he relies on references to publications to support a proposition, Mr. Fredrickson does so without offering any evidence that the publications' methods or techniques have been tested and verified.

"Another pertinent consideration is whether the theory or technique has been subjected to peer review and publication." *Daubert*, 509 U.S. at 593. Mr. Fredrickson has offered no evidence that his methods and techniques for developing a historic livestock water consumption quantity have been peer reviewed by another party, much less published. This omission is particularly concerning here, where all of Mr. Fredrickson's efforts at developing his expertise have occurred within the limited confines of this litigation.

"[I]n the case of a particular scientific technique, the court ordinarily should consider the known or potential rate of error." *Id.* at 594. In offering his opinion on the amount of water historically beneficially used for livestock watering from well 10A-5-W06, Mr. Fredrickson assures us that this calculation was done "with a reasonable degree of certainty." (F. Depo., Ex. B at 84:1-2.) However, Mr. Fredrickson never defines this degree of certainty, explaining that he was not "referring to an error rate" but "in a general sense the—the uncertainty that—that's associated with how much any cow drinks varies from cow to cow." (*Id.* at 84:7-10.) Mr. Fredrickson provides no evidence of particular error rates in his analysis as those rates relate to specific techniques or methods.

Finally, "[a] reliability assessment does not require, although it does permit, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community." *Daubert*, 509 U.S. at 594 (internal quotations and citations omitted). When describing how he determined which publications to rely on when researching and developing his opinions, Mr. Fredrickson did not mention that he assessed whether the sources were credible or had garnered any degree of general acceptance in the scientific community. (*See* F. Depo., Ex. B at 57:6-58:4.) Rather, Mr. Fredrickson describes a simple process for selecting publications based on the fact that "[s]ome [publications] duplicated others [so] I eliminated [them] simply because they referenced other documents …" (*id*. at 57:16-18.) Mr. Fredrickson supplied no other evidence of the criteria he used to eliminate data other than that he considered "what was most relevant in terms of the topics at hand." (*Id*. at 58:2-4.) Lacking any of the attributes of reliability *Daubert* typically requires of expert testimony, Mr. Fredrickson's proposed testimony simply cannot be deemed reliable.

b. Mr. Fredrickson cherry-picked data to support his conclusions.

A district court also may consider whether an expert has cherry-picked from the data the sources which support the expert's conclusions without addressing contrary or conflicting data. *See Barber v. United Airlines, Inc*., 17 Fed. Appx. 433, 437 (7th Cir. 2001) (excluding expert opinion of aviation expert who ignored relevant weather data and witness testimony because expert "cherry-picked the facts he considered to render an expert opinion[;] … such a selective use of facts fails to satisfy the scientific method and *Daubert*"); *see also Norris v. Baxter Healthcare Corp*., 397 F.3d 878, 886 (10th Cir. 2005) (excluding expert's testimony that "ignored or discounted without explanation the contrary epidemiological studies" that conflicted

with expert's opinion on the connection between silicone breast implants and disease). Here, Mr. Fredrickson relies on three sources of data to support his opinions: published material, the deposition of Mr. Cox (F. Depo., Ex. B at 94:5-10),[4] and Mr. Fredrickson's own personal observations (*id*. at 127:11; 137:6-10; 142:5-8). Mr. Fredrickson cherry-picks from these sources for the information which best supports his conclusions without addressing data that suggest a contrary inference or completely undermine his conclusion.

Mr. Fredrickson relies on statements Mr. Cox made in his deposition when those statements support his opinions, but ignores or dismisses them when they do not. For example, Mr. Cox stated that cattle would water at the Amado Well in the winter (C. Depo., Ex. C at 35:13-20), and the Zuni Spring, the High Lonesome well, and the Perry Lake well in the summer (*id*. at 37:21-24). Yet Mr. Fredrickson concludes that the contribution from the Amado Well, the Zuni Spring, the High Lonesome well, and the Perry Canyon Well as watering sources for livestock on the former ranch were "incidental at best and can reasonably be ignored" because they were not significant or reliable. (F. Report, Ex. A at 22.) Even though Mr. Fredrickson recognized that Mr. Cox's statements conflicted with his own opinions (F. Depo., Ex. B at 88:6-16), Mr. Fredrickson did not mention or attempt to reconcile this contradiction in his analysis (*see* F. Report, Ex. A at 22). So while the sole basis for the Fredrickson's claimed water right is the use to which the Coxes put well 10A-5-W06 in their cattle operation, Mr. Fredrickson simply

[4] Mr. Cox's deposition testimony carries particular weight here given the historical nature of the beneficial use issue at the center of this dispute. Mr. Cox lived and ranched in the Rincon-Hondo area from 1986 to 2000 (Cox Depo., Ex. C at 11:17; 13:10-17), his family ranched the Rincon-Hondo area since 1920 (*Id*. at 10:5-8), and, with the exception of the domestic component of the right—to which the parties have stipulated, the Fredrickson's claimed water right in well 10A-5-W06 derives entirely from the Cox's cattle operation.

ignores Mr. Cox's deposition testimony regarding the operation's water use in favor of his personal observations of the current condition of the relevant water sources to form his opinion. (*See id*. at 20-22; F. Depo., Ex. B at 89:12-25.)[5]

As another example, Mr. Cox testified that he did not recall any leaks associated with well 10A-5-W06's storage structures. (C. Depo., Ex. C at 75:19-20.) Mr. Fredrickson nevertheless calculated the historical water loss from leakage in the system to be 52,260 gallons per year. (F. Report, Ex. A at 61-62.) Mr. Fredrickson ignored Mr. Cox's testimony in favor of his personal observation of "evidence of previous leaks" (*Id*. at 60). Mr. Fredrickson then applied a 7% loss rate, obtained from a study of water use in feed yards, to calculate a component of the Fredrickson's claimed water right attributable to "chronic leaks" (*id* at 61-62).

One final example of Mr. Fredrickson's cherry-picking leads him to conclude that 59,054 gallons of water per year from well 10A-5-W06 were used to maintain the drinkers (*id*. at 56). In this instance, Mr. Cox specifically testified that water was never used to clean the drinkers (Cox Depo, Ex. C. at 51:17-52:8). Mr. Fredrickson again dismisses Mr. Cox's testimony without explanation in favor of "reported industry practice" (F. Report, Ex. A at 56). It cannot be gainsaid that Mr. Fredrickson, in all three of the examples provided, appears to have ignored highly relevant witness testimony to reach his conflicting opinions to reach the quantity of the water right the Fredricksons' claim. This is precisely the type of "selective use of facts" inimical to the scientific method and *Daubert*.

[5] The implication of excluding the contribution of these wells as additional historical watering sources for the Rincon-Hondo cattle herd is to significantly inflate the contribution of well 10A-5-W06, and thus overestimate the quantity of the water right Mr. Fredrickson concludes is associated with the well.

c. Mr. Fredrickson developed his claimed expertise in Cattle Operations for the purposes of this litigation.

It cannot be stressed enough that Mr. Fredrickson developed his "expertise" solely for the needs of this litigation. "One very significant fact to be considered is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying." *Daubert v. Merrell Dow Pharm., Inc*., 43 F.3d 1311, 1317 (9th Cir. 1995). Upon remand from the Supreme Court, the Ninth Circuit in *Daubert* determined that experts who had not studied the effect of taking a particular pharmaceutical drug on limb reduction defects before they were hired for the litigation could not provide reliable expert testimony on that topic. *Id*. The court reasoned that "experts whose findings flow from existing research are less likely to have been biased toward a particular conclusion … ." *Id*. This Court too has considered "whether the expert reached [his] opinion based on research conducted for the purposes of litigation or as the result of independent study." *Rimbert v. Eli Lilly and Co.*, No. CIV 06-0874 JCH/LFG, 2009 WL 2208570, at *5 (D.N.M. July 21, 2009) (citing *Daubert*, 43 F.3d at 1317). Like the experts in *Daubert*, Mr. Fredrickson's opinions are not the product of pursuits independent of this litigation:

> Q: In your report you site to numerous references, 41 by my count; is that fair?
>
> A: That sounds about right.
>
> Q: The ones you rely on are all listed in the back of your report?
>
> A: Correct.
>
> Q: And you reviewed these publications in response to the needs of this litigation; right?

A: That's true.

(F. Depo., Ex. B at 54:22-55:5.)

Mr. Fredrickson cannot point to any independent study of Cattle Operations in which he has engaged outside of this case. (*Id*. at 60:16-61:11.) When combined with the fact that Mr. Fredrickson is a party here, this calls the reliability of his proposed expert opinions into question:

> [A] party who acts as his or her own expert is *more* suspect than an expert paid by contingency. Most experts paid by contingency are repeat players in the judicial system with an incentive to maintain at least a minimal reputation for independence or risk their careers as experts in subsequent cases. A party to the litigation (or, here, its sole shareholder with the only financial stake in the outcome), by contrast, has no such incentive. For him or her, litigation is not an iterative process, and the risks to his or her reputation by offering junk testimony are largely irrelevant.

Perfect 10, Inc. v. Giganews, Inc., No. CV 11-07098-AB (SHX), 2014 WL 10894452, at *5 n.5 (C.D. Cal. Oct. 31, 2014) (excluding the expert opinion testimony of plaintiff's sole shareholder and CEO) (emphasis in original). Indeed, while Mr. Fredrickson has not outright stated that his opinions were results driven, that they were is well established. In 2006, when this litigation began, Mr. Fredrickson stated that his "personal opinions" led him to conclude that the Plaintiffs had underestimated the water requirements for cow-calf operations in Cibola County. (F. Depo., Ex. B at 58:15-60:9.) In the years since, these "personal opinions" have not changed (*id*. at 58:15-20); Mr. Fredrickson has merely dressed these personal opinions up in the clothing of expert evaluation. In light of these facts, Mr. Fredrickson's ability to proffer unbiased expert opinion testimony is dubious.

2. Mr. Fredrickson's Opinions Contain Unexplained Analytical Gaps

The "knowledge" prong of Rule 702 requires "more than [a] subjective belief or unsupported speculation." *Daubert*, 509 U.S. at 590. While an expert's knowledge may include extrapolations from existing data, the analytical gap between the data and the opinion proffered must not be too great. *Joiner*, 522 U.S. at 146. Thus, in *Joiner*, the Court clarified that a district court may strike expert testimony as unreliable on the basis of too great an analytical gap. *See id.* (rejecting argument that district court committed legal error when it disagreed with the conclusions that the expert drew from the studies, not solely the methodology the expert utilized, reasoning that "conclusions and methodology are not entirely distinct from one another"). Some of Mr. Fredrickson's opinions are inherently unreliable because they rely on speculative leaps taken from the data he reviewed or from his personal observations, and others are not derived by any supporting data at all.

a. Some opinions are supported only by impermissible speculation.

"It is axiomatic that an expert, no matter how good his credentials, is not permitted to speculate." *Goebel v. Denver and Rio Grande Western R.R. Co.*, 215 F.3d 1083, 1088 (10th Cir. 2000). But Mr. Fredrickson constructs many of his key opinions upon purely speculative foundations. In one, for example, Mr. Fredrickson concludes that in "favorable years" of forage production, cattle watered solely at well 10A-5-W06 and therefore did not water whatsoever at any alternative watering source. (F. Report, Ex. A at 39.) A necessary condition required to reach this conclusion is that the inherent behavior of cattle precludes the possibility that any cow would water outside an area where there is adequate forage. (*Id*. at 39.) Mr. Fredrickson supports

his opinion that the cattle herd on the former ranch actually, historically foraged in this manner by citing to a single quote from published material (*see id*. at 23.) That quote reads:

> Livestock, particularly cattle, are predictable in their grazing behavior. One of their most conspicuous habits is to graze convenient areas. These are generally areas close to water or those that are easily accessible, such as level terrain within an area of rough topography. Given the choice and/or lack of sufficient enticement, cattle will abuse these convenience areas.

J.D. VOLESKY ET AL., PROPER LIVESTOCK GRAZING DISTRIBUTION ON RANGELAND (1996). Mr. Fredrickson then leaps to the conclusion that there must have been an adequate supply of forage within a two-mile radius of well 10A-5-W06, citing a source stating that cattle will forage up to two miles from a viable water source. (F. Report, Ex. A at 23) (citing JERRY HOLECHEK, RANGELANDS 10 (1988)). Mr. Fredrickson thus constructs the following syllogism: given the inherent habits of cattle to "graze convenient areas," and given that there is an adequate supply of forage in "favorable years" when calculating all of the available forage within a two mile radius of well 10A-5-W06, it follows that in "favorable years" cattle only watered at that well, and thus any alternative watering source does not have to be factored into the consumption analysis of the historical beneficial use of the well. (*See* F. Report, Ex. at 23-24.) The problem with Mr. Fredrickson's logic is that it entirely fails to consider that Mr. Cox explicitly described that the cattle herd historically foraged and watered well beyond the area of well 10A-5-W06:

> Q: [I]n the summer, it was more open range, and they would range this entire area?
>
> A: Yeah.
>
> Q: And they would water at – in the summer, they would water at the Rincon-Hondo well, at the Zuni Spring well…at the High Lonesome well…and at the Perry Canyon, so four wells.
>
> A: Yes.

(C. Depo., Ex. C at 42:4-13.)

Mr. Fredrickson thus engages in precisely the kind of logical leap courts frown upon. *See, e.g.*, *Norris*, 397 F.3d at 886 ("when the conclusion simply does not follow from the data, a district court is free to determine that an impermissible analytical gap exists between premises and conclusion") (internal quotations and citations omitted). Mr. Fredrickson's opinion that cattle only watered at well 10A-5-W06 is further undermined by his blind calculation of all of the available forage within two miles of the well. (*See* F. Report, Ex. A at 29.) Mr. Cox stated that the historical ranching practices on the former ranch were such that the area around well 10A-5-W06 constituted only the edge of the summer range based on the way it was fenced off from the winter pasture. (C. Depo., Ex. C at 37:21-38:4.) Thus the manner in which the area was actually historically fenced and ranched directly contradicts Mr. Fredrickson's calculation because Mr. Fredrickson's two-mile radius circle was effectively cut in half by the fence. Mr. Fredrickson chose to construct his opinion from speculation, entirely disregarding relevant evidence that supports a rather different conclusion.

b. Other opinions lack any support.

While Mr. Fredrickson makes speculative leaps to support some of his conclusions, other conclusions are entirely unsupported. In its gatekeeping function, "[n]othing … requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Joiner*, 522 U.S. at 146. The Tenth Circuit has excluded the testimony of an expert as unreliable when it contained several subjective and unverifiable conclusions which did not state any facts upon which they were based. *See Henderson v. Nat'l R.R. Passenger Corp*., 412 Fed. Appx. 74 (10th Cir. 2011). In *Henderson*, the plaintiffs hired an expert to testify as to the negligent design of a railroad crossing. The expert's proposed testimony included the opinions

that "there are very serious safety deficiencies at the crossing" including "very sharp horizontal curves," "steep vertical curves," and a "big hump." *Id*. at 80. The court found this subjective testimony unreliable, reasoning that these determinations contained "nothing more than *ipse dixit*, making it nearly impossible for the trial court to evaluate his opinion … ." *Id*.

Mr. Fredrickson's opinions often consist of unsupported conclusory assertions. As one example, Mr. Fredrickson opines on the theoretical path a cow would take from well 10A-5-W06 to the High Lonesome well to predict the actual navigable distance between these two sources of water. (F. Report, Ex. A at 23.) Mr. Fredrickson presents this information an exhibit of the "Straight Line and Trail Path between Rincon Hondo and High Lonesome Wells." *Id*. In his deposition, Mr. Fredrickson stated that this "Trail Path," which marked the route cattle would travel between these two wells, was based on his "ground truth of—of that path." (F. Depo., Ex. B at 96:19-20.) Mr. Fredrickson does not refer to any facts in the record to validate his "ground truth," but, we know that it could not have been based upon Mr. Fredrickson's observations of cattle actually traveling the route, as Mr. Fredrickson has never run cattle on the Property, *id*. at 32:2-5, and Mr. Cox never described any path taken by cows between water sources.

Even were the Court to find that Mr. Fredrickson qualifies as an expert in Cattle Operations, Mr. Fredrickson's speculative and unsupported opinions lack the kind of reliability that Rule 702 and *Daubert* require. The Court should find that those opinions constitute inadmissible expert testimony under Rule 702.

IV. CONCLUSION

Mr. Fredrickson is intelligent, capable and accomplished. In his 28-year career as a nuclear engineer he has assessed the public health and environmental risks posed by radiotoxic

materials, performed nuclear facility safety analysis, and advised clients how to comply with technical safety requirements. Mr. Fredrickson also successfully founded his own nuclear engineering company, where he directed multi-million dollar subcontracts to prime contractors and managed large project staffs. Mr. Fredrickson is also a confident man—confident that he can accurately and reliably testify as to the amount of water that has been historically beneficially pumped from well 10A-5-W06. The *Daubert* gatekeeping function under Rule 702, however, does not ask the Court to measure the capability, accomplishments, confidence or even the intelligence of a proposed witness. It rather confers upon the Court the responsibility to determine whether a prospective witness is an expert, and if so, has the witness derived his or her opinions through a scientifically rigorous process that contained attributes of objectivity and fairness.

Mr. Fredrickson seeks to admit his own testimony to opine on any matter he sees fit such as when a cattle's watering source may be considered unreliable or insignificant, the path cattle would take between two geographical points, how to calculate a herd's available forage, how to determine the appropriate forage utilization rate, cattle foraging behavior, and the appropriate daily water intake rates of cattle, among other opinions. Mr. Fredrickson does not qualify as an expert on any of these subjects. Mr. Fredrickson has never given these kinds of opinions in any context prior to this litigation, he has never received any education or training that even remotely touches upon these matters, and he has never owned or worked with or around cattle. Mr. Fredrickson may be qualified to opine as an expert within the meaning of Rule 702 on some other subject, but he is not qualified to testify as an expert witness on Cattle Operations or to otherwise opine on the historical beneficial use of water for a cow-calf ranching operation that

has long since ceased to exist. Accordingly, for all of the reasons discussed, the United States respectfully asks this Court to exclude the proposed expert testimony of Craig Fredrickson as inadmissible under Federal Rule of Evidence 702.

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Respectfully submitted,

The United States of America

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