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6 **IN THE UNITED STATES DISTRICT COURT**
7 **FOR THE DISTRICT OF ARIZONA**
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9 El Paso Natural Gas Company LLC,

No. CV-14-08165-PCT-DGC

10 Plaintiff,

ORDER

11 v.

12 United States of America, et al.,

13 Defendants.
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16 Plaintiff El Paso Natural Gas Company, LLC brings claims against Defendants
17 United States of America, the Department of the Interior, the Bureau of Indian Affairs, the
18 U.S. Geological Survey, the Department of Energy, and the Nuclear Regulatory
19 Commission (collectively, the “United States”) under §§ 107 and 113 of the
20 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
21 El Paso seeks to recover response costs incurred in remediating 19 historical uranium mines
22 located on the Navajo Reservation (the “Mine Sites”). Doc. 55, ¶¶ 1-2. The United States
23 has counterclaimed, asserting that El Paso is responsible for all response costs. Doc. 53.

24 The United States moves to exclude opinions of El Paso expert Douglas Beahm.
25 Doc. 156. The Court will deny the motion.

26 **II. Legal Standard.**

27 Under Rule 702, a qualified expert may testify on the basis of “scientific, technical,
28 or other specialized knowledge” if it “will assist the trier of fact to understand the

evidence,” provided the testimony rests on “sufficient facts or data” and “reliable principles and methods,” and “the witness has reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702(a)-(d). An expert may be qualified on the basis of “knowledge, skill, experience, training, or education.” *Id.*

The proponent of expert testimony has the ultimate burden of showing that the expert is qualified and the testimony admissible. *See Lust v. Merrell Dow Pharm., Inc.*, 89 F.3d 594, 598 (9th Cir. 1996). The trial court must assure that expert testimony “both rests on a reliable foundation and is relevant to the task at hand.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993).

II. Discussion.

The United States makes five arguments: (1) Beahm lacks the requisite knowledge, skill, experience, training, or education to render opinions based on aerial photographs; (2) he did not use reliable methods in his aerial photography analysis; (3) his testimony about a February 1954 aerial photograph is unreliable and misleading; (4) his testimony about possible exploratory drilling by the United States is misleading and does not aid the Court in resolving a factual issue; and (5) his testimony is duplicative of another expert for El Paso. Doc. 156 at 2-3.

A. Qualification.

The United States argues that aerial photography interpretation involves complicated techniques that require professional experience and training. Doc. 156-1 at 3-4. Mr. Beahm had only limited exposure to aerial photography in connection with three or four geology classes, and those classes were focused on identifying geological features, not manmade features. *Id.* During his 40-year career, Mr. Beahm never sought academic or specialized training in photo interpretation. *Id.* He has never published professional papers, received awards in this discipline, or been a member of any professional society in the field of aerial photographic interpretation. *Id.* The United States asserts that Mr. Beahm may be qualified to opine on geology or general mining issues, but not on aerial photo interpretation. *Id.*

1 In response, El Paso cites portions of Mr. Beahm's deposition that largely confirm
2 the United States' assertions. He testified to learning about aerial photography analysis in
3 three or four courses focused on other subjects, and some fieldwork, at Colorado School
4 of Mines. Doc. 164-2 at 6-8. He further testified such analysis "is part of what we do" at
5 his firm, but provided no explanation of what he does with aerial photographs or how often.
6 *Id.* Mr. Beahm's resume does reflect a 40-year career in natural resource exploration, mine
7 development, mine operations, environmental permitting, and mine reclamation, but does
8 not mention aerial photography analysis. Doc.164-1 at 41-44. El Paso provides no other
9 information about his experience in this field.

10 The Court cannot conclude that coverage of aerial photography in three or four
11 college classes focused on other subjects, some college fieldwork, and the fact that Mr.
12 Beahm's firm engages in aerial photography analysis for clients provide a sufficient basis
13 for the Court to conclude that he is qualified to provide expert opinions in this field. But
14 the Court cannot tell whether such qualifications are key to his opinions. His deposition
15 suggests that he confirmed information from aerial photographs by field investigations on
16 the ground. *See* Doc. 164-2 at 8-9 ("Q: Was it difficult to distinguish natural features at
17 the mine sites from manmade activities based on the aerial photography that you reviewed
18 in your first report? A: Yes. That's why I went to the field and looked at features on the
19 ground."). If Mr. Beahm's opinions are based on features confirmed on the ground, and
20 not solely on aerial photographs, then his resume suggests that he likely has sufficient
21 expertise to provide the opinions. The Court must resolve this issue on the basis of the
22 foundation of and opinions expressed during the bench trial.¹

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26 ¹ The Court would request additional information to make a Rule 104(a)
27 determination before trial if this was a jury trial. Given that this is a bench trial, however,
28 the Court can make the determination during trial. *See United States v. Flores*, 901 F.3d
1150, 1165 (9th Cir. 2018) ("*Daubert* is meant to protect *juries* from being swayed by
dubious scientific testimony. When the district court sits as the finder of fact, there is less
need for the gatekeeper to keep the gate when the gatekeeper is keeping the gate only for
himself.") (emphasis in original; citation and quotations marks omitted).

1 **B. Reliability.**

2 The United States argues that the methods used by Mr. Beahm to interpret aerial
3 photographs are not reliable. Doc. 156-1 at 5. The United States contends that Mr. Beahm
4 did not obtain aerial photographs of sufficient quality, prepare orthomosaic photos, or view
5 the photos stereoscopically using techniques that would allow him to appreciate depth and
6 view the aerial photographs in 3D. *Id.*

7 El Paso points to several inaccuracies in the United States' argument. First, Mr.
8 Beahm reviewed both the photographs provided by the United States and higher quality
9 photographs provided by the opposing expert. Doc. 164-2 at 8:14-9:1, 10:12-23. Second,
10 Mr. Beahm orthorectified photos to fit the ground. Doc. 164-2 at 11:1-25.

11 Mr. Beahm provided this explanation about whether stereographic viewing of the
12 photographs was required:

13 I saw no need. We mapped the features on the ground. In the rebuttal,
14 we have mapped 73 percent of the total acreage of the features. There's only
15 – the remaining percentage is only those areas covered by the Navajo AML
caps.

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18 It depends on the application. In this case, my professional opinion is
19 that mapping the features that you can on ground is the best way to identify
20 them. And the quality of the 1954 aerials, because of their resolution, I – the
21 height the planes were flown, even if you could get the originals you still
would not be able to map the features that are on the ground accurately.

22 *Id.* at 12-13.

23 The United States provides an expert affidavit and excerpt from a book on
24 environmental forensics to argue that stereoscopic viewing is the only generally accepted
25 standard for viewing aerial photographs in environmental cases. Docs. 156-1; 156-2 at 5
26 ¶ 17, 42-47. The United States also argues that James Ebert, another El Paso expert,
27 testified that he believes reviewing stereo images in a case like this is indispensable.
28 Doc. 156-2 at 20:7-11.

1 But El Paso has provided a declaration from a partner to the government's aerial
2 photography expert attesting to ten elements that should be considered for photographic
3 interpretation, and asserting that stereo pair viewing is not always required. Doc. 365-2 at
4 1-3; *see also Fick v. Exxon Mobil Corp.*, N. 13-6608, 2017 WL 79887, at *3 (E.D. La. Jan.
5 9, 2017) ("Although the use of stereo pairs viewed through a stereoscope is certainly a
6 well-accepted method of examining a historical aerial photograph, it is not the only way.").
7 El Paso argues that Mr. Beahm's methodology clearly tracked the ten basic elements
8 identified in the declaration. *See* Doc. 164 at 8-9.

9 El Paso has presented sufficient evidence of other methods for interpreting aerial
10 photographs besides stereoscopic viewing. And Mr. Ebert testified that in some cases
11 stereoscopic viewing is unnecessary. Doc. 156-2 at 21:17-25. Moreover, while the United
12 States' expert stated that stereoscopic viewing is helpful and "enhances" the interpretation
13 of the mine features in this case, she does not explain why the method that Mr. Beahm
14 employed is unreliable. Doc. 156-2 at 6, ¶ 17-18. As noted above, Mr. Beahm appears to
15 have relied on more than aerial photographs to support his conclusions. *See* Doc. 164-1 at
16 5. The Court concludes that Mr. Beahm's methods are sufficiently reliable for his opinions
17 to be admissible.

18 **C. Misleading Aerial Photographs.**

19 The United States argues that Mr. Beahm's Rule 26 report contained a February
20 1954 aerial photograph with added annotations of features that he observed on much later
21 photographs or after visiting the mine sites in 2015 and 2016. Doc. 156-1 at 7. The United
22 States argues that this photograph is unhelpful to the factfinder and tends to create a false
23 impression that the annotated features were present in 1954, when there is an insufficient
24 basis to determine precisely when these mining activities and disturbances occurred. *Id.*
25 The United States does not explain how use of an allegedly inaccurate exhibit disqualifies
26 an expert from testifying under Rule 702.

27 Mr. Beahm testified during his deposition that he used the annotated 1954 image to
28 display information from his findings throughout the study, not to attribute that information

1 to 1954. Doc. 164-2 at 14:15-25. In his rebuttal report, Mr. Beahm reiterated that he did
2 not intend the annotations to show that drill trails were present in 1954. Doc. 164-5 at 16;
3 *see also* Doc. 164-6 at 4:23-5:6 (deposition of Mr. Ebert stating that imposing the images
4 on the 1954 image is a method to illustrate what has been there through time).

5 To the extent the United States objects to admission of the exhibit under Rule 403,
6 it can make the objection at trial.

7 **D. Misleading Opinions.**

8 The United States argues that Mr. Beahm’s conclusion that the United States Atomic
9 Energy Commission (“AEC”) conducted exploratory drilling at 19 Mine Sites is not
10 supported by the facts or confirmed to a “reasonable degree of scientific certainty.”
11 Doc. 156-1 at 8. In his expert report, Mr. Beahm opined that the AEC conducted
12 exploratory drilling at all of the Mine Sites with the possible exception of Ramco 20, 21,
13 22, and 24. Doc. 164-1 at 3, 17. During his deposition, Mr. Beahm clarified that he could
14 not say with reasonable certainty that the AEC drilled at some Mine Sites, merely that is
15 was possible. Doc. 156-2 at 35-38.

16 The United States argues that Mr. Beahm’s testimony must be excluded because he
17 identifies only a possibility, not a probability. *See* Doc. 156-1 at 9. But testimony need
18 not be sufficient to support verdict before it is admissible. “Reliable expert testimony need
19 only be relevant, and need not establish every element that the plaintiff must prove, in order
20 to be admissible.” *Primiano v. Cook*, 598 F.3d 558, 565 (9th Cir. 2010). And Mr. Beahm’s
21 testimony that El Paso’s predecessors likely did not perform certain site activities –
22 regardless of who else might have performed them – will be relevant to equitable allocation
23 issues in this case.

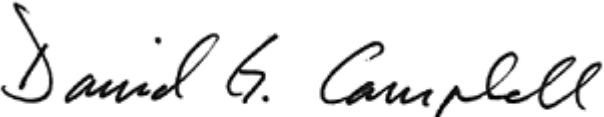
24 **E. Duplicative Testimony.**

25 Case Management Order No. 3 limits each side to one expert per issue. Doc. 76 at
26 3. The United States argues that Mr. Beahm’s testimony overlaps with Mr. Ebert’s
27 testimony and should be excluded. The Court intends to hold the parties to the one-expert
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1 rule set forth in Case Management Order No. 3. If the United States believes an expert is
2 providing duplicative testimony during trial, it may object.

3 **IT IS ORDERED** that the United States' motion to exclude the testimony of
4 Mr. Beahm (Doc. 156) is **denied** without prejudice to its making appropriate objections at
5 trial.

6 Dated this 19th day of February, 2019.

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David G. Campbell
11 Senior United States District Judge
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