IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF NEW MEXICO

PUEBLO OF JEMEZ, a federally recognized Indian Tribe,

Plaintiff,

vs. No. CIV 12-0800 JB\JHR

UNITED STATES OF AMERICA,

Defendant,

and

NEW MEXICO GAS COMPANY,

Defendant-in-Intervention.

MEMORANDUM OPINION, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER[1]

THIS MATTER comes before the Court on the bench trial held on October 29-November 20, 2018; November 29-November 30, 2018; December 3, 2018; December 5, 2018; and December 13, 2018. The primary issue is whether Plaintiff Pueblo of Jemez has the exclusive right to use, occupy, and possess the lands of the Valles Caldera National Preserve ("Valles Caldera") pursuant to its allegedly unextinguished and continuing aboriginal title to those lands. The Court concludes that Jemez Pueblo has not established aboriginal title to the Valles Caldera.

[1]On August 31, 2019, the Court issued a Sealed Memorandum Opinion, Findings of Fact, Conclusions of Law, and Order, filed August 31, 2019 (Doc. 398)("Sealed Opinion"). In the Sealed Opinion, the Court requested that the parties propose redactions to protect confidential information. See Sealed Opinion at 1 n.1. In response, Plaintiff Pueblo of Jemez and Defendant United States of America proposed that the Court redact portions of the Sealed Opinion. See Defendant's Memorandum Opinion and Order with Proposed Redactions, filed September 15, 2019 (Doc. 400); Plaintiff's Memorandum Opinion and Order with Proposed Redactions, filed September 16, 2019 (Doc. 401). This public version of the Memorandum Opinion, Findings of Fact, Conclusions of Law, and Order is the redacted version of the Sealed Opinion. The Court has made no other changes to the public opinion other than the redactions.

Although the evidence proves that Jemez Pueblo has actually and continuously used and occupied the Valles Caldera for a long time, the evidence also shows that many Pueblos and Tribes also used the Valles Caldera in ways that defeat Jemez Pueblo's aboriginal title claim.

FINDINGS OF FACT

All parties have submitted proposed findings of fact. See Plaintiff's, Defendant's, and Defendant-In-Intervention New Mexico Gas Company's Joint Proposed Findings of Fact and Conclusions of Law, filed April 15, 2019 (Doc. 384)("Joint Proposed Findings"); Plaintiff Pueblo of Jemez's Proposed Findings of Fact, filed April 15, 2019 (Doc. 388)("Jemez Pueblo's Proposed Findings"); United States' Proposed Findings of Fact, filed April 15, 2019 (Doc. 386)("United States' Proposed Findings"). The Court has carefully considered all three sets of proposed findings and accepts some of those findings, rejects some, and finds some facts that no party brought to its attention. The Court sets forth its findings below.[2]

[2]Although the parties express many of the background facts in different ways, they do not dispute many of those facts. The Court has, throughout its findings, synthesized the parties' proposed findings where they are compatible. In many cases, the Court adopts one party's finding and declines to adopt an opposing party's finding for stylistic reasons: for example, where one party's proposed findings more completely discuss a fact than another party, the Court generally has adopted the more thorough discussion. Where the Court adopts one party's finding and declines to adopt an opposing party's finding for a substantive reason -- that is, because the evidence better supports one finding over another -- the Court explains the reason for that conclusion in the footnotes. Furthermore, the Court does not adopt the parties' proposed findings that advance legal conclusions, for example, whether a given Pueblo or Tribe "dominated" another Tribe, was an area's "dominant" or "exclusive" user, or "permitted" another Tribe to use its aboriginal territory. Finally, the Court does not adopt the parties' proposed findings that discuss various expert and fact witnesses' credibility; although the evidence at times better supports one finding over another, the Court credits the witnesses' sincerity and efforts to present the Court with accurate information.

With respect to exhibits, the Court has adopted additional citation conventions to assist the reader. First, the Court indicates the dates on which it admitted each document, drawing those dates from the Clerk's Minutes Before the Honorable James O. Browning, filed October 29, 2018,

1. The Valles Caldera Geology.[3]

1. The Valles Caldera is a volcanic crater in the center of the Jemez Mountains, State of New Mexico. See Trial Transcript at 75:1-5 (taken Oct. 29, 2018), filed December 20, 2018 (Doc. 337)("Oct. 29 Tr.")(Fogleman); Pueblo of Jemez Expert Witness Report by William Fogleman at 4-5 (undated), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. 187 ("Fogleman Report").

2. Approximately 1.2 million years ago, a series of volcanos erupted, which spread ash and pyroclastic flow[4] that drained out the top part of the magma chamber.[5] See Oct. 29 Tr. at 75:1-13 (Fogleman); Fogleman Report at 4; Pueblo of Jemez v. United States, Memorandum Opinion and Order at 2 n.1, filed October 25, 2018 (Doc. 317)("Oct. 25 MOO"), 350 F. Supp. 3d 1052, 1056 n.1 (D.N.M. 2018)(Browning, J.).

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entered December 14, 2018 (Doc. 336)("Bench Trial Minutes"). Second, for ease of reference, the Court refers to an exhibit that Jemez Pueblo offered as "Jemez Pueblo's Ex." and to an exhibit that the United States offered as "United States' Ex."

[3]Jemez Pueblo and the United States jointly ask the Court to adopt their proposed facts that discuss the Valles Caldera's geology and geographic features. See Joint Proposed Findings at 1-3. The Court therefore adopts the parties joint proposed findings of fact that discuss the Valles Caldera's physical structure and substance.

[4]"Pyroclastic flow" refers to "a dense cloud of ash, pumice, rock fragments, and volcanic gases which is expelled at high temperature from a volcano and subsequently travels at great speed close to the ground." Pyroclastic Flow, Oxford English Dictionary, http://www.oed.com/view/Entry/238488?redirectedFrom=pyroclastic+flow& (last visited April 19, 2019).

[5]A "magma chamber" is "a reservoir of magma within the planetary crust, esp. below a volcano." Magma Chamber, Oxford English Dictionary, http://www.oed.com/view/Entry/112232?redirectedFrom=magma+chamber#eid38558607 (last visited April 19, 2019).

3. Volcanologists classify the Valles Caldera as a young caldera.[6] See Oct. 29 Tr. at 75:1-2 (Fogleman); Fogleman Report at 4.

4. The Valles Caldera is an active volcano. See, e.g., Oct. 29 Tr. at 75:1-2 (Fogleman); Fogleman Report at 4-5.

5. The volcano's upper magma chamber lacked magma, which effected a collapse that resulted in the empty crater that today is known as the Valles Caldera. See Oct. 29 Tr. at 75:1-13 (Fogleman); Fogleman Report at 4-5; Pueblo of Jemez v. United States, Oct. 25 MOO at 2 n.1, 350 F. Supp. 3d at 1056 n.1.

6. After the magma chamber collapsed, a lake formed over the caldera floor. See Oct. 29 Tr. at 75:25-76:5 (Fogleman); Fogleman Report at 5.

7. The lake drained from the caldera when the caldera's southwest rim eroded. See Oct. 29 Tr. at 76:20-25 (Fogleman).

8. The caldera lake's drainage helped to form the Jemez River valley. See Oct. 29 Tr. at 76:22-77:11 (Fogleman); Fogleman Report at 7.

9. The caldera rim's southwest region is the caldera base's lowest elevation. See Oct. 29 Tr. at 77:12-19 (Fogleman); id. at 85:5-12.

[6]The word "caldera" merely refers to a "deep cauldron-like cavity on the summit of an extinct volcano." Caldera, Oxford English Dictionary, http://www.oed.com/view/Entry/26282?redirectedFrom=caldera#eid (last visited April 19, 2019).

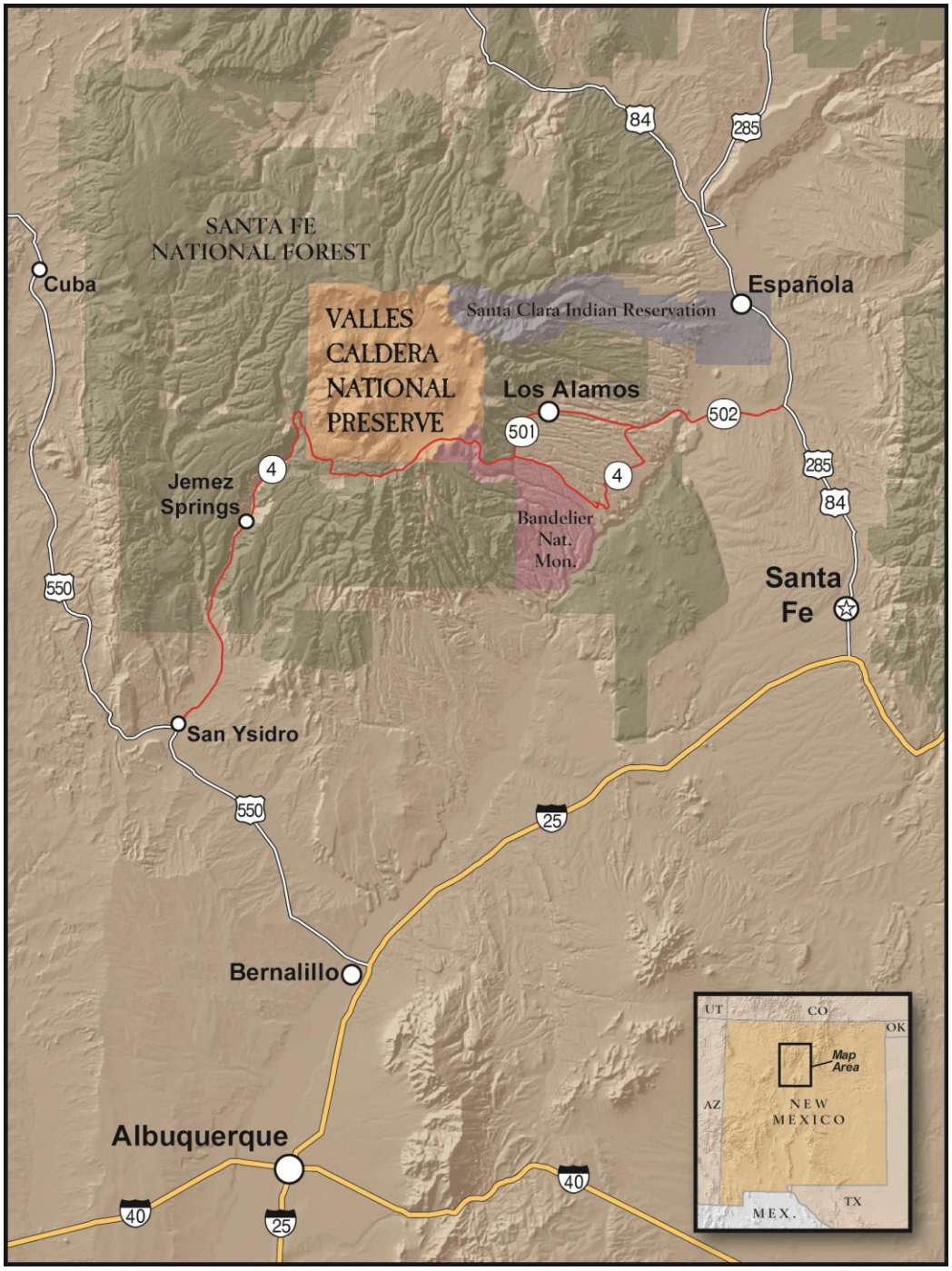

Figure 1. Valles Caldera, Sandoval and Rio Arriba Counties, New Mexico

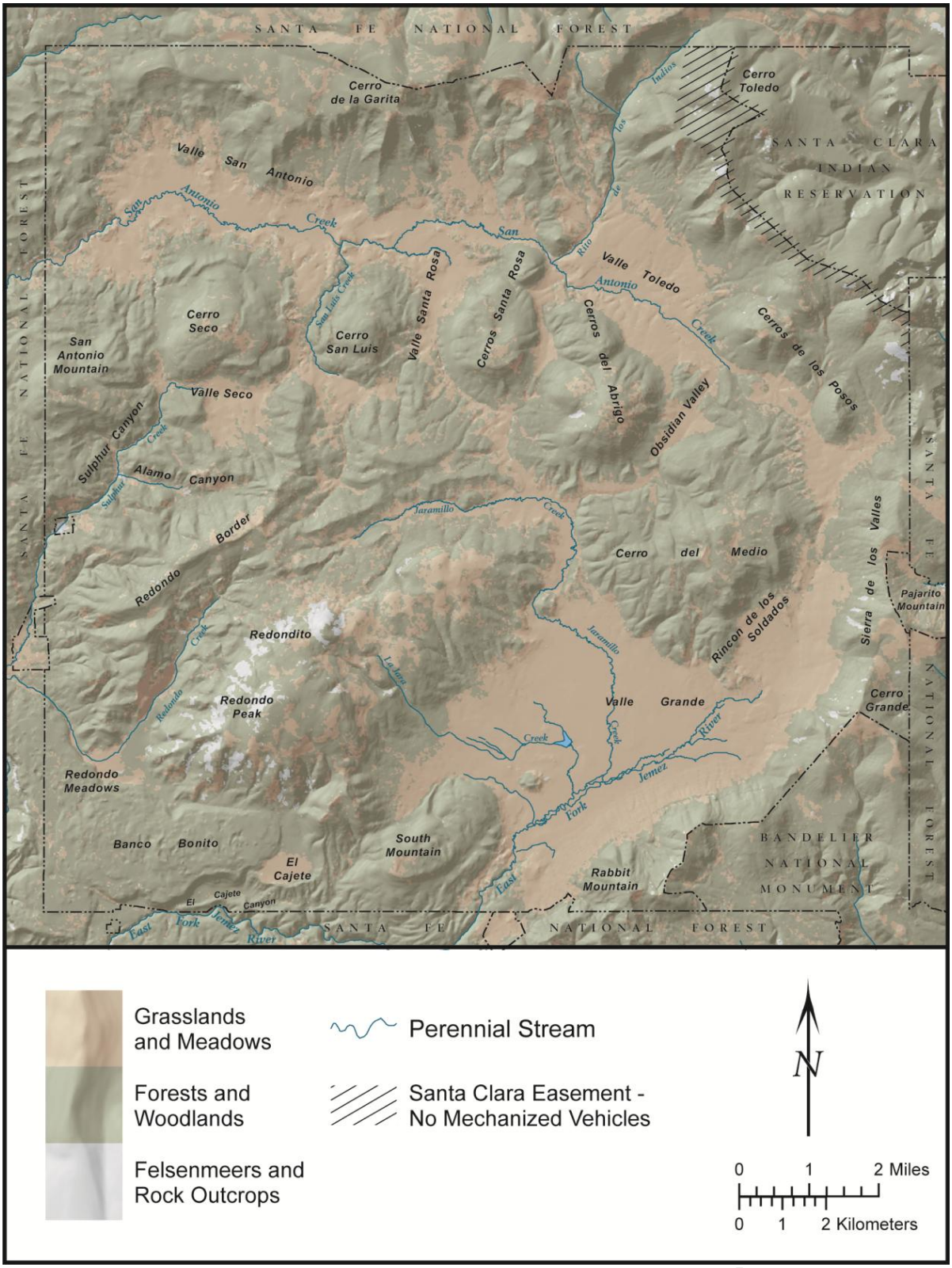

Figure 2. Landscape Features of the Valles Caldera[7]

10. The Jemez River headwaters are in the Valles Caldera. See Trial Transcript at 1813:5-6 (taken Nov. 6, 2018), filed January 15, 2019 (Doc. 343)("Nov. 6 Tr.")(Ferguson).

11. The East Fork Jemez River waters, which include Jaramillo Creek, La Jara Creek, Redondo Creek, Rito de los Indios, San Antonio Creek, and Sulphur Creek, flow into the Jemez River. See Fogleman Report at 7.

12. Springs, streams, and rivers are an expression of groundwater elevation. See Oct. 29 Tr. at 84:12-24 (Fogleman).

13. A spring or river is where groundwater is exposed to the land surface, and such areas are marshy. See Oct. 29 Tr. at 84:12-24 (Fogleman).

14. The caldera rim is approximately twelve to thirteen miles in diameter. See Oct. 29 Tr. at 76:12-15 (Fogleman); Fogleman Report at 4.

15. Redondo Peak is a resurgent magma dome that formed when magma pushed up the caldera floor. See Oct. 29 Tr. at 75:25-76:5 (Fogleman); id. at 85:13-22 (Fogleman); Fogleman Report at 5.

16. The caldera's elevation ranges from 7,000 feet in the southwest region to 11,254 feet at Redondo Peak.[8] See Oct. 29 Tr. 77:12-19 (Fogleman); Fogleman Report at 4.

[8]At 11,258 feet elevation, Redondo Peak is the thirteenth highest major summit in New Mexico. See List of mountain peaks of New Mexico, Wikipedia, https://en.wikipedia.org/wiki/List_of_mountain_peaks_of_New_Mexico (last visited April 29, 2019).

17. The Valles Caldera includes four of Merriam's life-zones[9]: (i) the Subalpine Zone at 9,500 to 11,500 feet, which has cooler temperatures, and allows for Spruce trees and Fir forests, and wildlife that includes bighorn sheep and unique small animal species which tend to live at higher elevations; (ii) the Coniferous Forest Zone at 8,500 to 9,500 feet, which is the caldera's predominant zone and consists of hydrologic features and wildlife that includes beavers, raccoons, black bear, and elk; (iii) the Mountain Transition Zone at 7,000 to 8,500 feet, which permits predominately Ponderosa pine and Douglas fir, and wildlife that includes mule deer and horned owl; and (iv) the Grassland/Woodlands Zone at 4,500 to 7,000 feet, which permits tall grasslands and wildlife that includes turkey, jackrabbits, foxes, and mountain lions. See Oct. 29 Tr. at 79:12-82:4 (Fogleman); Fogleman Report at 5-6.

18. Most of the Valles Caldera is inside the caldera rim, including four high-mountain valleys and at least ten volcanic domes, which are located within the Valles Caldera's exterior boundaries as Congress established pursuant to the Valles Caldera Preservation Act, 114 Stat. 598. See Valles Caldera Preservation Act of 2000, 16 U.S.C. §§ 698v-698v-10 (repealed 2014)("Preservation Act").[10]

[9]American zoologist C. Hart Merriam developed the "life zone" concept "in 1889 as a means of describing areas with similar plant and animal communities." Life Zone, Wikipedia, https://en.wikipedia.org/wiki/Life_zone (last visited April 19, 2019).

[10]Congress has repealed and replaced the Preservation Act with the National Defense Authorization Act of 2015, Pub. L. No. 113-291, § 3043, 128 Stat. 3292, 3798. See also Pueblo of Jemez v. United States, 790 F.3d 1143, 1149 n.7 (10th Cir. 2015).

2. Valles Caldera Conveyances.[11]

19. When the Treaty of Guadalupe Hidalgo ended the Mexican-American War in 1848, the United States formally acquired New Mexico, which was subsequently organized under a territorial government. See Kurt Anschuetz and Thomas Merlan, More Than a Scenic Mountain Landscape: Valles Caldera National Preserve Land Use History 27 (dated 2007), admitted October 29, 2018, at trial as United States' Ex. DX-KX ("VCNP Land Use History").

20. In the Act of June 21, 1860, 12 Stat. 71, Congress authorized Luis Maria de Baca's heirs to select up to five square tracts of vacant land within the New Mexico Territory totaling up to 496,447 acres.[12] See Act of June 21, 1860, 12 Stat. 71 ("1860 Act"); Trial Transcript at 3516:17-18 (taken Nov. 15, 2018), filed February 11, 2019 (Doc. 357)("Nov. 15 Tr.")(García y Griego);

[11]Jemez Pueblo and the United States jointly ask the Court to adopt their proposed findings that discuss the Valles Caldera's conveyances after the United States acquired the land from Mexico. See Joint Proposed Findings at 3-6. The Court therefore adopts the parties' joint proposed findings of fact that discuss such conveyances, presents them here for convenience and as an orientation to the claim area, and presents in chronological order the findings that follow.

[12]As author Robert Julyan explains in The Place Names of New Mexico, the 1860 Act resulted from a mistake:

> In 1835, Juan Maese and 25 other Las Vegas citizens were granted 500,000 acres in the Las Vegas area. But then in 1841 another grant was given to Don Luis Maria Cabeza de Baca . . . born in Santa Fe in 1754. Unfortunately, the two grants seemed to overlap, creating problems. In 1860, the US Congress recognized the primacy of the earlier grant, but to compensate Baca's heirs for their loss Congress allowed them to select an equal amount of vacant, non-mineralized land, to be located in five square parcels anywhere in NM. The Bacas' first choice was the land in the Jemez Mountains, since known as Baca Location No. 1. Baca location No. 2 was N[orth] of Tucumcari, in the area of Fort Bascom, on the Canadian River . . . . Baca Locations 3 and 4 were in lands later incorporated into Colorado and Arizona. And Baca Location No. 5 was in eastern NM, in territory reserved for Navajo and Apache Indian Reservations.

Robert Julyan, The Place Names of New Mexico 27 (1996).

Pueblo of Jemez Expert Witness Report by Terence Kehoe at 10 (dated March 23, 2018), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. 193 ("Kehoe Report").

21. In December, 1860, the Baca heirs selected their first parcels -- known as "Baca Location No. 1" -- an area totaling approximately 99,289 acres of land in and adjacent to the Valles Caldera. Pueblo of Jemez v. United States, Oct. 25 MOO at 7, 350 F. Supp. 3d at 1060 (citing United States v. Redondo Dev. Co., 254 F. 656, 657 (8th Cir. 1918)).

22. On September 30, 1876, the General Land Office approved the first Baca Location No. 1 survey. See Surveyor General's Office, Santa Fe, New Mexico, Field Notes of the Survey of Baca Location No. 1 at 15 (dated Sept. 30, 1876), admitted October 29, 2018, at trial as United States' Ex. DX-Q.

23. In January, 1899, the District Court of the County of Bernalillo, Territory of New Mexico, ordered Baca Location No. 1's sale at public auction to the highest bidder. See Kehoe Report at 13.

24. On March 18, 1899, the District Court of the County of Bernalillo, Territory of New Mexico approved Baca Location No. 1's sale to Frank Clancy, who on the same day sold Baca Location No. 1 to the Valles Land Company, which Mariano Otero and his son owned. See Kehoe Report at 13; Order Approving Report and Confirming Sale, Whitney v. Otero at 1-2 (dated March 18, 1899), admitted October 29, 2018, at trial as United States' Ex. DX-Y; Bargain & Sale Deed, F. Clancy to Valles Land Co. at 100 (dated March 18, 1899), admitted October 29, 2018, at trial as United States' Ex. DX-X.

25. On October 16, 1909, the Valles Land Company deeded Baca Location No. 1 to the Redondo Development Company, which concluded its purchase in 1913 after completing a

series of installment payments totaling $247,512.00. See Warranty Deed, Valles Land Co. to Redondo Development Co. at 102 (dated Oct. 16, 1909), admitted October 29, 2018, at trial as United States' Ex. DX-AH; Deed of Trust, Redondo Development Co. to W. Strickler, Trustee for the Valles Land Co. at 103 (dated Oct. 16, 1909), admitted October 29, 2018, at trial as United States' Ex. DX-AH; Deed of Release, W. Strickler, Trustee, to Redondo Development Co. at 104 (dated Jan. 27, 1913), admitted October 29, 2018, at trial as United States' Ex. DX-AH; Trial Transcript at 3991:19-3993:3 (taken Nov. 16, 2018), filed February 11, 2019 (Doc. 358)("Nov. 16 Tr.")(Kehoe).

26. On December 14, 1918, the Redondo Development Company, and Frank and George Bond, entered into a memorandum of agreement to sell Baca Location No. 1 for $400,000.00 through a series of installment payments. See Mem. of Agreement Between Redondo Development Co. and Frank and G. Bond for the Sale of Baca Location No. 1 at 276-81 (dated Dec. 14, 1918), admitted November 16, 2018, at trial as United States' Ex. DX-DJ; Nov. 16 Tr. at 3993:4-3995:16 (Kehoe)

27. The Baca Location No. 1 sales agreement excluded the tract's forest resources, reserving to Redondo Development and its successors the right to remove and sell all timber for a ninety-nine-year period. See Mem. of Agreement Between Redondo Development Co. and Frank and G. Bond for the Sale of Baca Location No. 1 at 276-81; Nov. 16 Tr. at 3993:4-3995:16 (Kehoe).

28. The Bonds assumed possession of Baca Location 1 on January 1, 1919. See Indenture Between Redondo Development Co. and George and Frank Bond at 22-25 (dated April 8, 1926), admitted October 29, 2018, at trial as United States' Ex. DX-BC.

29. On April 8, 1926, the Redondo Development Company's president signed an indenture conveying Baca Location No. 1, with timber and one-half of all minerals excepted, to George and Frank Bond. See Indenture Between Redondo Development Co. and George and Frank Bond at 22-25.

30. From 1954 to 1963, Frank and George Bond's successors-in-interest leased Baca Location No. 1 to outside ranchers. See Pueblo of Jemez v. United States, Oct. 25 MOO at 11 n.7, 350 F. Supp. 3d at 1062 n.7 (citing Kristen K. de Graauw et al., Historical Dendroarchaeology of Two Log Structures in the Valles Caldera National Preserve, New Mexico, USA, 32 Dendrochronologia 336, 337 (2014)("Historical Dendroarchaeology")).

31. In 1963, James Patrick Dunigan purchased Baca Location No. 1 from Frank and George Bond's successors-in-interest. See Pueblo of Jemez v. United States, Oct. 25 MOO at 11 n.7, 350 F. Supp. 3d at 1062 n.7 (citing Historical Dendroarchaeology at 337).

32. On July 25, 2000, then-President of the United States William Jefferson Clinton signed the Preservation Act, thereby establishing the Valles Caldera National Preserve. See Pueblo of Jemez v. United States, Oct. 25 MOO at 11, 350 F. Supp. 3d at 1062 (citing Pueblo of Jemez v. United States, 790 F.3d 1143, 1149-50 (10th Cir. 2015)).

33. The Preservation Act authorized the Secretary of Agriculture to purchase Baca Location No. 1 from the Dunigan family "to protect and preserve scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural, and recreational values . . . and to provide for multiple use and sustained yield" of its renewable resources. 16 U.S.C. §§ 698v-2, -3. See Pueblo of Jemez v. United States, Oct. 25 MOO at 11, 350 F. Supp. 3d at 1062.

34. A high-pressure natural gas pipeline, together with its appurtenances and supporting facilities (collectively, the "Pipeline"), is located within the Valles Caldera. See Order Granting Defendant-in-Intervention New Mexico Gas Company's Unopposed Motion for Order Approving Stipulations of All Parties Regarding Easement Owned by New Mexico Gas Company at 2, filed December 19, 2016 (Doc. 104)("Easement Order").

35. The United States' action in United States v. 49.77 Acres of Land, more or less, in Sandoval County, New Mexico, No. CIV 99-0774 JP\DJS (D.N.M. Oct. 18, 1999)(Parker, J.), condemned a perpetual and assignable easement title to Tract No. 2013-E within the Valles Caldera National Preserve, which became effective July 12, 1999. See Final Judgment at 1, No. CIV 99-0774 JP\DJS, filed October 18, 1999 (Doc. 19); Easement Order at 2.

36. Tract No. 2013-E is a right-of-way that is thirty feet wide and contains 49.77 acres, more or less. See Easement Order at 2.

37. The United States Department of Energy sold the Pipeline and the Easement (collectively, the "Pipeline System") to PNM Gas Services, a Division of Public Service Company of New Mexico ("PNM"), by a Quitclaim Deed and Transfer Agreement ("Quitclaim Deed") that became effective August 1, 1999. See Easement Order at 2; Quitclaim Deed at 1-3, filed December 19, 2016 (Doc. 104-1).

38. PNM transferred the Pipeline to New Mexico Gas Company ("NMGC") in connection with the sale of PNM's gas operations to NMGC effective January, 2009. See Easement Order at 2.

39. PNM transferred the Easement to NMGC pursuant to the Assignment and Assumption of Easements dated January 30, 2009, a copy of which was recorded in the records of

Sandoval County, New Mexico, on February 5, 2009, in Book 412, pages 2907 to 2919. See Easement Order at 2.

40. NMGC presently owns the Pipeline System. See Easement Order at 2.

41. Jemez Pueblo does not seek to quiet title to the Pipeline System or to NMGC's ingress and egress right across the Valles Caldera National Preserve. See Easement Order at 3.

3. Historic Valles Caldera Use.

The trial establishes that many American Indian Tribes' cultural and religious practices and histories involve the Valles Caldera. Moreover, these Pueblos[13] and Tribes have used the Valles Caldera for over 800 years. Several Pueblos and Tribes conceive their ancestral territory as encompassing sizable portions of these lands.

A. Many American Indian Tribes' Cultural and Religious Practices and Histories Involve the Valles Caldera.

[13]The word "Pueblo," when used as a proper noun,

> refers to communities of Native Americans, both in the present and in ancient times. The first Spanish explorers of the Southwest used this term to describe the communities housed in apartment structures built of stone, adobe mud, and other local material. These structures were usually multi-storied buildings surrounding an open plaza. The rooms were accessible only through ladders lowered by the inhabitants, thus protecting them from break-ins and unwanted guests. Larger pueblos were occupied by hundreds to thousands of Pueblo people. Various federally recognized tribes have traditionally resided in pueblos of such design.

Pueblo, Wikipedia, https://en.wikipedia.org/wiki/Pueblo (last visited August 23, 2019). Because Pueblos are federally recognized Tribes according to the United States Bureau of Indian Affairs ("BIA"), the Court variously refers to Pueblo entities and their members as Tribes, Indians, and American Indians. See Indian Entities Recognized by and Eligible To Receive Services From the United States Bureau of Indian Affairs, Federal Register, https://www.federalregister.gov/documents/2019/02/01/2019-00897/indian-entities-recognized-by-and-eligible-to-receive-services-from-the-united-states-bureau-of (last visited August 23, 2019).

42. The Valles Caldera's unique physiographic features represent a spiritual "Healing Space" for numerous Keres and Tewa Pueblos.[14] Kurt Anschuetz, Ph.D. Expert Report at 63-97 (March 22, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-RP ("Anschuetz Report"). See Trial Transcript at 5051:9-5052:11 (taken Dec. 3, 2018), filed February 18, 2019 (Doc. 363)("Dec. 3 Tr.")(Marinelli, Anschuetz).

43. The Keres and Tewa Pueblos' traditional Valles Caldera lore include stories of their search for and eventual settlement of their respective, permanent homelands. See Dec. 3 Tr. at 5119:10-25 (Marinelli, Chavarria)(defining Tewa aboriginal domain boundaries as southern Colorado to the north, the Jemez Mountains' western edge to the west, the Sandia Mountains to the south, and the Sangre de Cristo Mountains to the east); id. at 5202:4-14 (Marinelli, Chavarria)(describing Santa Clara Pueblo's headwaters within the Valles Caldera as belonging to many Tribes under a shared-use ownership concept); Interview Notes of Peter Pino by Kurt F. Anschuetz, Ph.D. at 1-4 (dated 2011), admitted October 29, 2018, at trial as United States' Ex. DX-MH ("Pino Interview Notes"); Anschuetz Report at 68 ("The fact that many Pueblo (and other tribal communities) view the Jemez Mountains as one of their Mountains of Cardinal Direction

[14]The Keres Pueblos speak languages that belong to the Keresan language family and include the Pueblos of Chochiti, Kewa (formerly Santo Domingo), San Felipe, Santa Ana, Zia, Acoma, and Laguna, while the Tewa Pueblos speak the Tewa language, which belongs to the Tanoan language family, and include the Pueblos of Nambe, Ohkay Owingeh, Pojoaque, San Ildefonso, and Tesuque. See Kurt Anschuetz, Ph.D. Expert Report at 68 (March 22, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-RP ("Anschuetz Report"). Another Tanoan language is Towa, which the Jemez Pueblo people speak. See Anschuetz Report at 68. Moreover, the languages that the Keres, Tewa, and Towa Pueblos speak are not mutually intelligible. See Towa (Jemez) Language, Native Languages of the Americas, http://www.native-languages.org/towa.htm (last visited April 20, 2019)("Though these languages are closely related, speakers of one cannot fully understand speakers of another (similar to German and English speakers).").

that define the limits of their homelands underscores the characterization of the Valles Caldera and the surrounding Jemez Mountains peaks are [sic] a part of a great commons.").

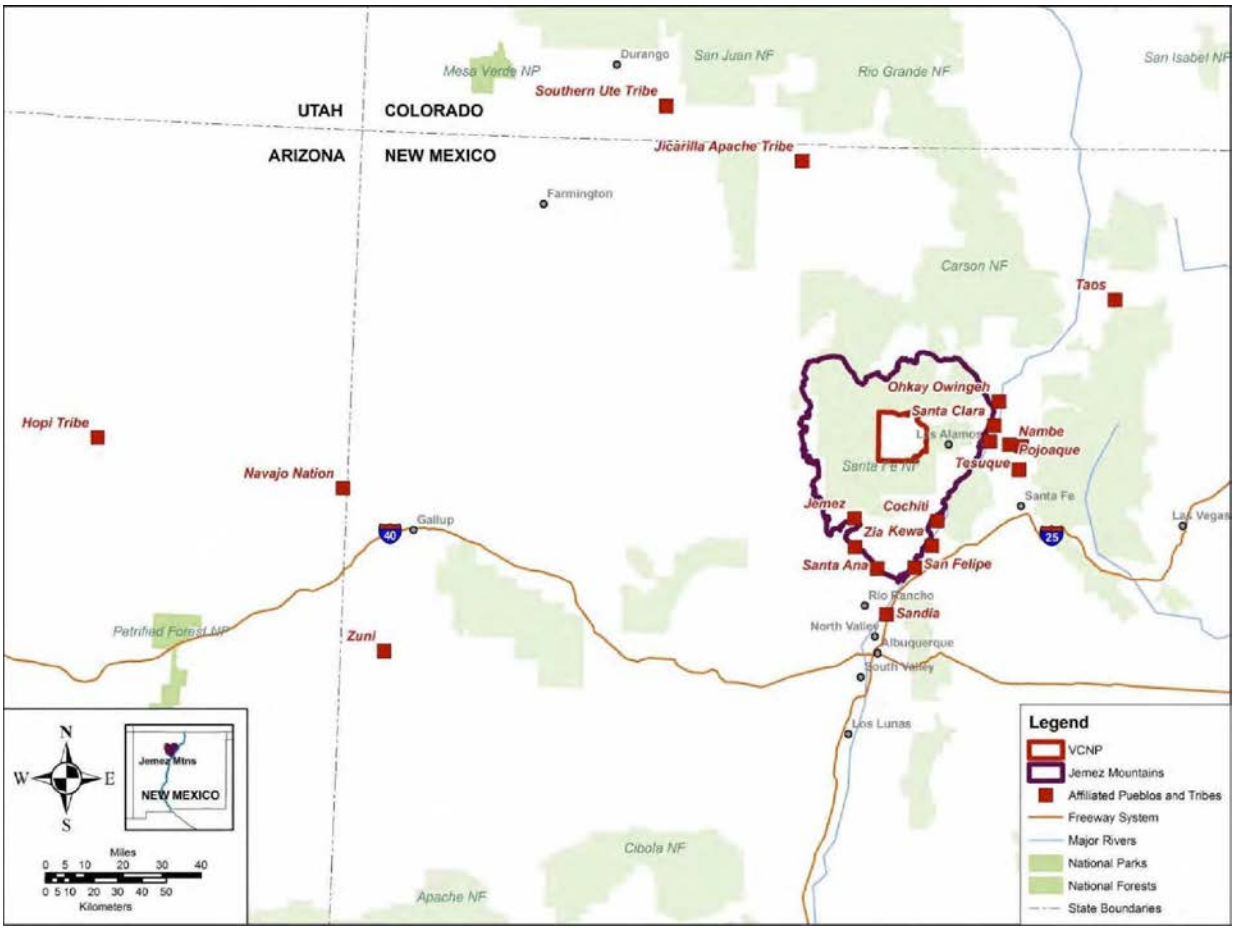

Figure 3. Location of Pueblos and Tribes Affiliated with the Valles Caldera

44. Since prehistoric times, Zia, Cochiti, Kewa (formerly Santo Domingo), Nambe, Picuris, Pojoaque, San Felipe, San Ildefonso, Ohkay Owingeh (formerly San Juan), Sandia, Santa Ana, Santa Clara, and Tesuque Pueblo members have made pilgrimages to Redondo Peak to conduct traditional religious ceremonies. See William B. Douglass, Notes on the Shrines of the Tewa and Other Pueblo Indians of New Mexico at 358, in Proceedings of the Nineteenth International Congress of Americanists (Frederick W. Hodge ed., 1917)("Notes on Shrines"),

pages 344-78 admitted October 31, 2018, at trial as United States' Ex. DX-AL ("Indians from the pueblos of Jemez, Sia [sic], Santo Domingo, Sandia, Cochiti, San Ildelfonso, Santa Clara, and San Juan, . . . went to the summit of the peak every year during August."); Florence Hawley Ellis, Navajo Indians I: An Anthropological Study of the Navajo Indians 124 (1974)("Navajo Indians I"), pages 123-42 admitted November 19, 2018, at trial as United States' Ex. DX-EC ("In some cases several different tribes claim a certain especially high mountain as a shrine area . . . . Mt. Pelado,[15] highest peak in the Jemez range, is visited by Zia, Jemez, San Felipe, Santo Domingo, Cochiti, and the Tewa Pueblos north of Santa Fe; [redacted] Pueblos of Zia, Jemez, and Santa Ana v. U.S., Indian Claims Comm'n, Docket No. 137, Transcript of Testimony at 51 (taken Dec. 5, 1956)(Mann, Toya), admitted October 29, 2018, at trial as United States' Ex. DX-CK ("Zia, Jemez, and Santa Ana Pueblos v. ICC")([redacted]; In the Matter of the Petition of the Public Service Company of New Mexico for Authorizations Necessary to Participate in Baca Unit 1, Public Service Company of New Mexico, Case No. 1562, Transcript of Proceedings at 100 (taken Nov. 7, 1980)(Lucero), admitted October 29, 2018, at trial as United States' Ex. DX-EX ("In re PNM Authorizations")(stating that the Navajo, Zuni, Picuris, Laguna, and Santa Clara peoples use Redondo Peak for traditional religious purposes); Hearings on the Draft Environmental Impact Statement -- Geothermal Demonstration Program, Baca Ranch, Sandoval and Rio Arriba Counties, New Mexico, Before the All Indian Pueblo Council at 49-50

[15]"Redondo Peak . . . on some old maps was labeled Mount Pelado." Julyan, supra n. 12 (1996). "On some old maps [Redondo Peak] was labeled *Mount Pelado*, causing some confusion with Cerro Pelado to the S[outh]." Julyan, Supra, at 288.

(taken Aug. 16, 1979)(Tafoya), admitted November 16, 2018, at trial as United States' Ex. DX-EQ ("Tr., Hr'gs on the Geothermal Env. Impact Statement")(discussing Santa Clara's shrine on Redondo Peak); Final Environmental Impact Statement -- Geothermal Demonstration Program, 50 MW Power Plant, Baca Ranch, Sandoval and Rio Arriba Counties, New Mexico at J-12-13 (dated Jan. 1, 1980), admitted October 29, 2018, at trial as United States' Ex. DX-EU, ("Environmental Impact Statement -- Geothermal Demonstration Program")("The most important religious site near the project area is Redondo Peak. [redacted] for at least six pueblos."); Anschuetz Report at 147-63 (describing multiple Pueblos' pilgrimages, shrines, and ceremonies within the Valles Caldera).

45. [redacted] See Oct. 29 Tr. at 516:21-517:20 (Dykema, P. Tosa); Transcript of Trial Testimony at 505:1-3 (taken Oct. 30, 2018), filed December 20, 2018 (Doc. 292)("Oct. 30 Tr.")(Liebmann); id. at 516:10-25 (West, Liebmann); Redondo File 1 at 5 (dated 2001), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. 240; id. at 9 ([redacted]); Redondo File 2 at 11 (dated 2001), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. 241 ([redacted]).

46. [redacted] See Oct. 30 Tr. at 505:6-506:15 (West, Liebmann); Oct. 29 Tr. at 217:9-23 (Dykema, P. Tosa); Liebmann Report at 19-20.

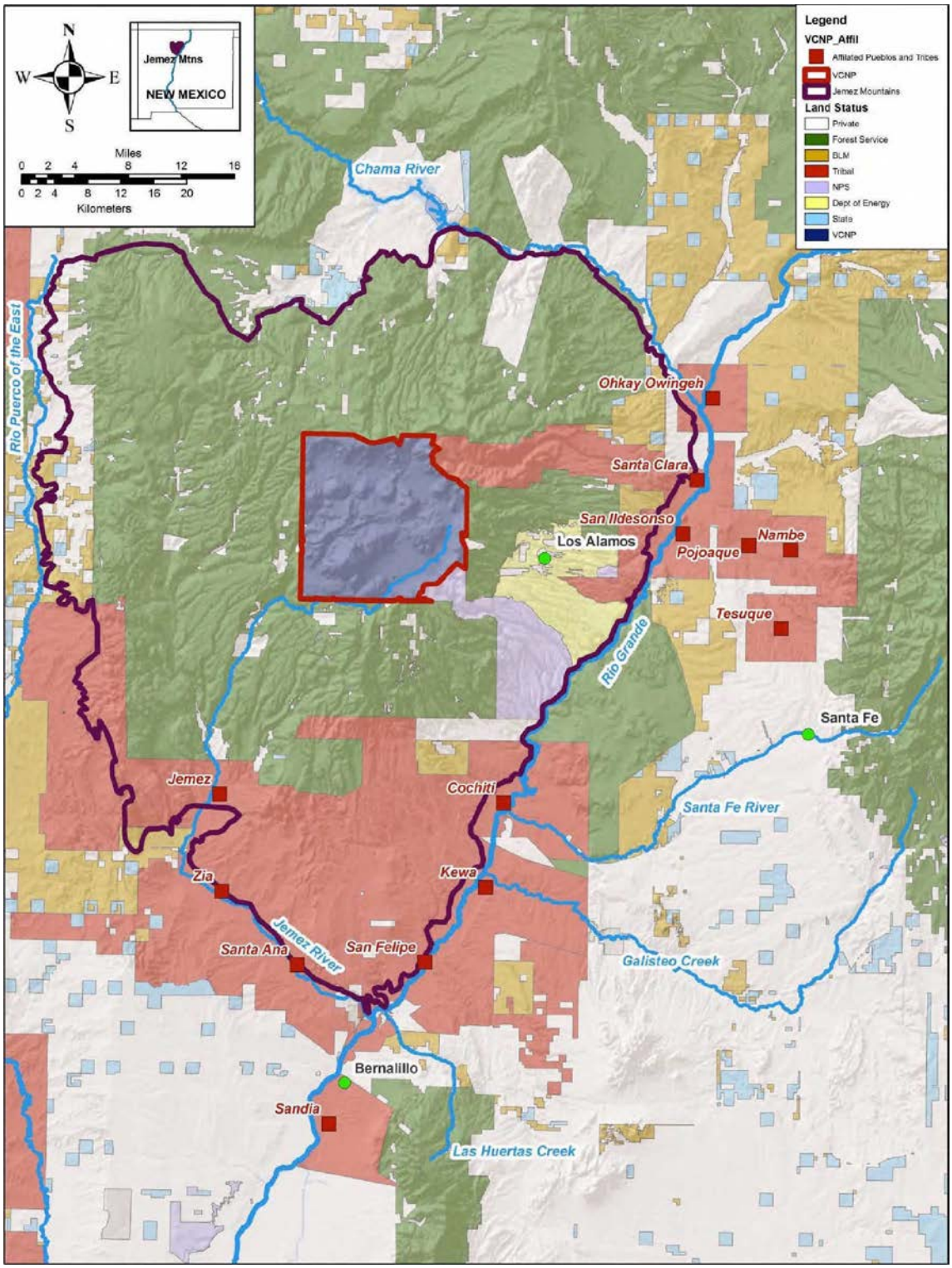

Figure 4. Location of Nearest Pueblos and Tribes Affiliated with the Valles Caldera.

47. [redacted][16]

Redondo Peak File 1 at 2-9; Redondo Peak File 2 at 8-13.

48. [redacted]

[redacted][17] See, e.g., Oct. 30 Tr. at 518:10-519:21 (West,

[16]Jemez Pueblo asks the Court to find that t[redacted] Jemez Pueblo's Proposed Findings ¶ 310, at 108. See Oct. 30 Tr. at 507:10-511:23 (West, Liebmann). The evidence, however, does not support the proposed fact. [redacted] 124. Hence, based on the proffered evidence, the Court will not adopt the proposed fact.

[17]Jemez Pueblo asks the Court to find that, [redacted] Jemez Pueblo's Proposed Findings ¶ 308, at 108. The evidence, however, does not support this proposed fact. Jemez Pueblo relies on Liebmann's testimony, expert report, and rebuttal report to Anschuetz. See Jemez Pueblo's

Liebmann); Liebmann Report at 21; Redondo File 2 at 11 ([redacted]).

49. Multiple Pueblos maintain their Valles Caldera connections through traditional songs, ceremonial liturgies, and tribal speeches, legends, and folk stories. See e.g., Anschuetz Report at 4 (discussing oral tradition's importance among American Indian peoples); Trial Transcript at 2027:16-17 (taken Nov. 7, 2018), filed January 15, 2019 (Doc. 344)("Nov. 7 Tr.")(Marinelli, Lucero)(affirming that Zia Pueblo members "sing songs about Redondo Peak").

50. Zia Pueblo's migration history[18] encompasses the community's Jemez Mountains' occupation, which includes land within the Valles Caldera. See, e.g., Pueblos de Zia, Jemez, and

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Proposed Findings ¶ 308, at 108 (citing Oct. 30 Tr. at 519:22-520:22 (West, Liebmann); Liebmann Report at 19-22; Expert Report in Response to Dr. Kurt Anshuetz at 2 (dated May 21, 2018), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 195). Liebmann reached his conclusion [redacted] Oct. 30 Tr. at 519:25-520:4 (Liebmann). [redacted] see Oct. 30 Tr. at 301:11-302:14 (Dykema, P. Tosa) [redacted]; id. at 305:4-9 (Dykema, P. Tosa) [redacted]; Trial Transcript at 5601:11-5602:22 (taken Dec. 13, 2018), filed February 19, 2019 (Doc. 366)("Dec. 13 Tr.")(Marinelli, Liebmann)([redacted]); Dec. 3 Tr. at 5013:17-5014:10 (Anschuetz)([redacted]). The record does not support the proposed fact that [redacted]. The Court will not, therefore, adopt this proposed fact.

[18]Jemez Pueblo asks the Court to find that, "[w]hen Jemez migrated into the Valles Caldera area, Zia was pushed south of the Valles Caldera into the area where Zia is located today." Jemez

Santa Ana v. U.S., ICC Docket 137, Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana (Jemez Pueblo's ICC Ex. No. 18) at 1 (dated 1951), admitted October 29, 2018, at trial as United States' Ex. DX-BZ ("Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana")[19] (including Redondo Peak as a site supporting Zia, Jemez and Santa Ana's land

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Pueblo's Proposed Findings ¶ 623, at 197 (citing Nov. 7 Tr. at 2042:18-2045:12 (J. Lucero); Trial Transcript at 4832:6-13 (taken Nov. 30, 2018), filed February 18, 2019)(Doc. 362)("Nov. 30 Tr.")(Anschuetz); Sarah Meyer, Pueblos Desire Protection of Sacred Sites, Los Alamos Monitor at 3 (dated Feb. 2, 2002), admitted November 19, 2018, at trial as United States' Ex. DX-IU; Interview with Governor Carl Brent Schildt, Lt. Governor Jerome Lucero, and Francisco Toribio, with Joseph A. Little, Eq., and Lisa A. Franceware, Esq., Pueblo of Zia at 2 (dated Nov. 11, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-RI. The cited evidence, however, does not support Jemez Pueblo's implication that Jemez Pueblo forcibly removed Zia Pueblo from the Jemez Mountains. See, e.g., Nov. 7 Tr. at 2042:18-2045:12 (J. Lucero); Nov. 30 Tr. at 4832:6-13 (Anschuetz); Sarah Meyer, supra, at 3 ("After staying in the area for a time . . . Zia and other Native American groups moved to the foothills."); Interview with Governor Carl Brent Schildt, Lt. Governor Jerome Lucero, and Francisco Toribio, with Joseph A. Little, Eq., and Lisa A. Franceware, Esq., Pueblo of Zia at 2 (stating that [redacted]). The Court, therefore, will not adopt the proposed fact.

[19]Jemez Pueblo asks the Court to find that, because "DX-BZ does not have a legend, does not clarify which sites are associated with a particular tribe, fails to include sites that PX 118 identifies as Jemez, . . . overall identifies fewer sites than PX 118," and because "Lucero incorrectly identified DX-BZ as a map of the Valles Caldera when the map only contains a small portion of the Valles Caldera and primarily concerns areas southwest of the Claim Area," "did not know who created DX-BZ, why it was created, or have any knowledge of what input was received from Zia in creating DX-BZ . . . limited weight should be given to DX-BZ and to Mr. Lucero's testimony about the same." Jemez Pueblo's Proposed Findings ¶ 625, at 197 (citing Trial Transcript at 621:19-25 (taken Nov. 1, 2018), filed January 11, 2019 (Doc. 340)(Liebmann); id. at 622-623:9-19 (Liebmann); id. at 664:24-666:17 (Liebmann); Nov. 7 Tr. at 2030:6-10 (Lucero); id. at 2040:20-2041:8 (J. Lucero); Trial Transcript at 4068:1-13 (taken Nov. 19, 2018), filed February 12, 2019 (Doc. 359)(Kehoe)). Although the Court agrees with Jemez Pueblo that Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana identifies fewer sites than other documents that Ellis created for the Pueblos' ICC litigation, the Court concludes that the exhibit credibly identifies sites in and near the Valles Caldera that are important to Zia Pueblo, Jemez Pueblo, and Santa Ana Pueblo regardless Lucero's familiarity with the exhibit, or whether the

claim before the ICC); Pino Interview Notes at 1-4 (discussing Zia Pueblo's historic settlements in the Jemez Mountains and along the Jemez River); Anschuetz Report at 148 ("Peter Pino, a Pueblo of Zia member, states that during its *Migration*, his Pueblo's First People came through the Valles Caldera and stopped 'at Redondo Peak, which they named.'" (quoting Peter Pino)(emphasis in Anschuetz Report)).

exhibit has a legend or assigns each site to a specific Tribe. The Court, therefore, will not adopt the proposed fact.

Figure 5. Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana

51. The Valles Caldera's geological features have great spiritual significance for several Keres and Tewa Pueblos; for example, such Pueblos consider the Valles Calderas valleys and surrounding summits to represent the "Earth-Mother Bowl." E.g., Trial Transcript at 4570:2-4571:5 (taken Nov. 29, 2018), filed February 18, 2019 (Doc. 361)("Nov. 29 Tr.")(Anschuetz)("And so you have depiction of this Earth-Mother Bowl as the container of life

that's enclosed by mountains of cardinal direction."); Anschuetz Report at 80 ("The view that the summits of the Mountains of Cardinal Direction are principal intersections between the Natural and supernatural realms of the *Cosmos* is made tangible through the depiction of the Sky-Father Basket resting on the summits formed on the rim of the Earth-Mother Bowl." (emphasis in original)).

B. Many American Indian Tribes Have Used the Valles Caldera for Over 800 Years.

52. The initial Jemez Mountain occupation date is the early 1200s C.E.[20] See, e.g., Anschuetz Report at 34-38 (discussing Tewa and Keres archeological sites along the Valles Caldera's east and southeast slopes); id. at 190-91.

53. Objective and scientific archeological data confirms traditional Jemez Mountains migration and settlement lore among the Keres (Cochiti, Kewa, San Felipe, Santa Ana, and Zia) and Tewa (San Ildefonso and Santa Clara) Pueblos, migrated to and settled the Jemez Mountains, including the Valles Caldera, and large numbers of Keres and Tewa peoples arrived at the Jemez Mountains' east and south flanks beginning in the early 1200s C.E. See, e.g., Dec. 3 Tr. at 5051:9-5052:11 (Marinelli, Anschuetz)(asserting that many Pueblos' current and ancestral lands extend into Jemez Mountains). Anschuetz Report at 34-38 (discussing Tewa peoples cultural-historical presence in the Upper Jemez River Valley archeological district and concluding that,

[20]The Tenth Circuit notes that "CE stands for 'of the common era' . . . an alternative way of expressing the concept denoted by AD and . . . a 'neutral' chronological term that is 'not specifically anchored in Christianity and therefore sensitive to all and any of the world's religions and belief systems.'" Pueblo of Jemez v. United States, 790 F.3d at 1148 n.5 (quoting Common Era, Macmillan Dictionary, http://www.macmillandictionary.com/us/buzzword/entries/common-era.html (last visited January 21, 2015)).

"[c]onsidering the similar influx of Keres populations in to the Cochiti-Kewa, San Felipe-Santa Ana, and Lower Jemez River Valley archaeological districts, it is clear that many, culturally diverse Pueblo groups were simultaneously occupying lands in the Jemez Mountains in proximity to the Valles Caldera").

54. Keres and Tewa and Towa Jemez Mountains occupancy evidence includes large and small Pueblo-village remnants, larger farmsteads and smaller fieldhouses, and associated artifacts.[21] See, e.g., Oct. 30 Tr. at 370:12-25 (West, Liebmann)(discussing Jemez archeological evidence -- villages, fieldhouses, ceramics, and stone tools -- found within and near the Valles Caldera); Anschuetz Report at 34-53 (discussing the Jemez Mountains ancestral Pueblo populations' Valles Caldera use based on archeological and tree-ring records); Kurt Anschuetz, Ph.D. Expert Rebuttal Report at 14-16 (March 21, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-SA ("Anschuetz Rebuttal Report")(asserting that, in addition to Jemez Pueblo, Tewa and Keres peoples possessed high-altitude agricultural skills sufficient to farm within the Valles Caldera); Liebmann Report at 4-8 (discussing Jemez Pueblo's northern Rio Jemez watershed occupation for over 800 years).

[21]Jemez Pueblo asks the Court to find: "Archaeological evidence verifies that ancestral Jemez people were the exclusive and dominant occupants and users of the Claim Area between 1300-1700 C.E." Jemez Pueblo's Proposed Findings ¶ 286, at 103. The evidence before the Court, however, does not support this proposed fact. See, e.g., Anschuetz Report at 34-53 (discussing the Jemez Mountains ancestral pueblo populations' Valles Caldera use based on archeological and tree-ring records); Kurt Anschuetz, Ph.D. Expert Rebuttal Report at 14-16 (dated March 21, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-SA)(asserting that, in addition to Jemez Pueblo, Tewa and Keres peoples possessed high-altitude agricultural skills sufficient to farm within the Valles Caldera). The Court, therefore, declines to adopt the proposed fact.

55. Many ancestral Tewa villages, ancestral- and present-day Keres villages, important sacred areas, ceremonial sites, and religious shrines exist within Jemez Province's boundaries, as Jemez Pueblo defines them.[22] See, e.g., Oct. 29 Tr. at 283:5-284:14 (Dykema, P. Tosa)(acknowledging that Santa Clara Pueblo's and Jemez Pueblo's homelands "could very well overlap"); Anschuetz Report at 37-53 (describing archeological evidence which indicates that Tewa and Keres populations lived near lands that encompass the Valles Caldera); id. at 54 (asserting that "Tewa Pueblos maintain tight associations with varied archaeological and other cultural resources in the Jemez Mountains," and that "varied Keres Pueblos maintain similarly close ties with cultural resources assemblages in the Jemez Mountains"); id. at 148 ("Pino explained that Pueblo has village 'sites up in the Jemez Mountains,' and his ancestors lived in the higher elevations up there for some time, however, 'they eventually came down to this lower area because that's where the water starts to spread.'"); id. at 191 ("Members of several affiliated communities, including Zia, Santa Clara, San Ildefonso, and Kewa are known to have gathered varied plant resources, hunted game animals, harvested birdfeathers, and collected rocks and minerals in the Valles Caldera. Some locations . . . are so important that they are marked with shrines shared by different communities.").

[22]The archeological, ethnographic, and historic evidence demonstrates that "Jemez Province" was not exclusive to Jemez and that the many Pueblos and Tribes used those lands since pre-historic times. Compare Ferguson Report at 62 (mapping Jemez ancestral territory that encompasses and extends approximately eighteen miles north of the Valles Caldera), with Anschuetz Rebuttal Report at 39 (mapping multiple Pueblos' locations within Ferguson's Jemez ancestral territory map).

56. Trails link the Keres and Tewa ancestral communities along the Jemez Mountains' northeast and east flanks with large areas within and west of the Valles Caldera. See, e.g., Anschuetz Report at 174-76 (discussing traditional trails and roads -- both literal and figurative -- that once connected numerous Pueblos throughout the Jemez Mountains, including across the Valles Caldera); Rebuttal to Report of Matthew Liebmann by Rory Gauthier at 16 (dated May 21, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-SB ("Gauthier Rebuttal Report")([redacted]); Rebuttal to Report of Garcia y Griego by Thomas Merlan at 2-3 (dated May 20, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-RY ("Merlan Rebuttal Report")("Queres Indians would advise [Captain Francisco] Barrio-Nuevo that the trail by way of the Vallecito Viejo up into the Vallecito de los Indios and on through the Valle Grande would be far better for the Spaniards and their horses than would any trail north by either the San Diego or the Guadalupe Canyon.").

57. Keres and Tewa ancestral communities along the Jemez Mountains are associated with thousands of fieldhouses, and many hundreds of acres of agricultural infrastructure, ceremonial sites, sacred areas, mineral procurement areas, hunt traps and blinds, camp sites, and various other sites that date from the early 1200s C.E. through at least 1700 C.E. See Anschuetz Rebuttal Report at 11 (discussing large, high-elevation early-seventeenth century Tewa settlements less than 3.5 miles from the Valles Caldera and concluding that the settlements' occupants could have farmed with relative ease within the Valles Caldera); id. at 34-42 (discussing the ancestral Pueblos' need for large homelands to accommodate seasonal environmental

changes); id. at 190-91 (discussing a small, high-altitude, seasonal farm site within the Valles Caldera that excavation and analysis suggests Tewa people occupied); Expert Report of Rory Gauthier[23] at 8 (dated March 22, 2018), admitted October 29, 2018, as United States' Ex. DX-RR ("Gauthier Report")(depicting isolated sherds[24] distribution and associated Jemez, Keres, and Tewa cultural affiliations within the Valles Caldera); id. at 14-16 (discussing Tewa, Keres, and Towa ceramic-types distribution within the Valles Caldera).

[23]Rory Gauthier examined the Valles Caldera's entire ceramics collection using several methodologies, including unaided visual inspection, a hand lens, and occasionally a binocular microscope, as well as archaeological evidence from two related archaeological sites located within Baca Location No. 1's original boundaries. See, e.g., Trial Transcript at 2355:19-23 (taken Nov. 8, 2018), filed January 22, 2019 (Doc. 350)("Nov. 8 Tr.")(Leonard, Gauthier)(confirming Gauthier's identification methods); id. at 2360:12-13 ("I looked at the entire collection that the Valles Caldera National Preserve had."); id. at 2422:15-24 (West, Gauthier)(confirming that Gauthier used a hand-held magnifying glass to determine utility-wares temper for about forty to fifty percent of his analysis); id. at 2478:23-2479:8 (Leonard, Gauthier)(discussing Gauthier's analysis of the two Baca Location No. 1 sites). Utility wares are a particular "everyday cookware" that archeologists such as Gauthier refer to also as "bean pots." Nov. 8 Tr. at 2356:3-5 (Gauthier)

The State of New Mexico chose Gauthier to nominate New Mexico sites for inclusion in the Register of Historic Places, based on Gauthier's four decades of research and archeological experience in the Southwest United States and archeological expertise specific to New Mexico. See Nov. 8 Tr. at 2289:24–2290:21 (Leonard, Gauthier)(noting that Gauthier began conducting archeological field work in the early 1970s); id. at 2296:12–2299:19 (discussing Gauthier's professional experience working with the New Mexico State Historic Preservation Office); Gauthier Report at 2 ("I have over 40 years of experience in the identification and analysis of southwest Native American ceramics.").

[24]"In archaeology, a sherd, or more precisely, potsherd, is commonly a historic or prehistoric fragment of pottery." Sherd, Wikipedia, https://en.wikipedia.org/wiki/Sherd (last visited May 1, 2019).

Figure 6. Select Routes and Trails Through the Sierra de los Valles on the Valles Caldera's East Side

58. Tewa and Navajo populations have used several historic trails that originated around 1250 C.E. on the Valles Caldera's eastern boundary and which are still in use today. See e.g., Jacqueline L. Stark, Historic Routes of the Valles Caldera Nat'l Preserve from 1876-1953, at 1 (December 10, 2009)(pages 1-28 admitted October 29, 2018, at trial as United States' Ex. DX-LL)(discussing seventeen historic maps that depict routes through the Valles Caldera); Gauthier Report at 15 (discussing the Old Navajo trail through the Valle Grande).

59.

[redacted][25] See e.g., Trial Transcript at 1432:2-6 (taken Nov. 4, 2018), filed January 11, 2019 (Doc. 341)("Nov. 4 Tr.")(Luebben, Whatley)([redacted]); Nov. 6 Tr. at 1805:13-1811:3 (Keegan, Ferguson)([redacted]); Pueblo of Jemez Expert Witness Report by Dr. TJ Ferguson[26] at 12 (dated March 22, 2018), admitted October 29,

[25]Jemez Pueblo asks the Court to find that these trails and sites "are associated with exclusive and dominant ancestral Jemez use and occupancy from approximately 1300 through 1700 C.E." Jemez Pueblo's Proposed Findings ¶ 299, at 106. The record before the Court, however, does not support this proposed fact. See e.g., Nov. 6 Tr. at 1993:4-1995:4 (Marinelli, Ferguson)(acknowledging other Pueblos' claims to Valles Caldera use); Anschuetz Report at 163-91 (discussing numerous Tribes' pilgrimages, ceremonies, shrines, pathways, and agricultural and cultural practices within the Valles Caldera); id. at 191 ("Members of several affiliated communities, including Zia, Santa Clara, San Ildefonso, and Kewa are known to have gathered varied plant resources, hunted game animals, harvested birdfeathers, and collected rocks and minerals in the Valles Caldera."). The Court, therefore, will not adopt the proposed fact.

[26]Ferguson's expert report does not establish the frequency with which Jemez Pueblo historically used or presently uses the Valles Caldera, but instead shows that Jemez Pueblo has a relationship with the Valles Caldera that is similar to the relationship that many surrounding Tribes enjoy. See, e.g., Anschuetz Rebuttal Report at 34-41 ("I accept the general proposition, which Ferguson articulates, that Jemez's cultural landscape was established early in the Pueblo's history . . . . I base my concurrence with these views on my understanding of . . . the Valles Caldera as a multilayered cultural landscape in which the Pueblo of Jemez is one of many cultural communities . . . ."). Moreover, Ferguson's Valles Caldera use study focuses narrowly on Jemez Pueblo; Ferguson interviewed only Jemez Pueblo members, rarely asked Jemez Pueblo members about other Tribes' Valles Caldera use, and, although he admitted that other Tribes likely hunt the animals that live within the Valles Caldera, made no effort to confirm this assumption. See, e.g., Nov. 6 Tr. at 1893:23-1895:11 (Ferguson)(affirming that Ferguson "made no attempt to interview members of any other federally recognized Indian Tribe as part of [his] work on this case"); id. at 1907:2-1908:8 (Ferguson); id. at 1961:20-1962:2 (Ferguson)(affirming that Ferguson "made no effort to determine how frequently other tribes used any portion of the Preserve lands"); id. at 1963:6-24 (Ferguson).

2018, at trial as Jemez Pueblo's Ex. PX 190 ("Ferguson Report")([redacted]); Liebmann Report at 6 [redacted]).

60. For many centuries, Keres, Tewa, and other Pueblo and non-Pueblo Tribes have used the land and resources within the Valles Caldera's interior rim for a variety of activities, including hunting, livestock grazing, religious practices, and gathering plants, minerals, and water.

Ferguson's conclusion that Jemez Pueblo "is the tribe with the most documented use of the preserve and is the dominant user," made after engaging in an eight-year-long project to document that use, is methodologically flawed, because Ferguson studied only Jemez Pueblo's Valles Caldera use. Nov. 6 Tr. at 1893:23-1895:11 (Marinelli, Ferguson). See Anschuetz Rebuttal Report at 40-41. Although Ferguson admitted that he needed to "interview Jemez members to determine the Jemez use of the Valles Caldera," Nov. 6 Tr. at 1895:8-11 (Marinelli, Ferguson), he made no efforts to determine the way other Tribes use those lands, see, e.g., Nov. 6 Tr. at 1894:19-1895:11 (Ferguson); id. at 1895:20-1897:1 (Ferguson); id. at 1900:4-14 (Ferguson); id. at 1962:19-1964:10 (Ferguson); Nov. 7 Tr. 2136:8-2137:13 (Ferguson)(acknowledging that Ferguson spent eight years compiling Jemez Pueblo's Valles Caldera place names, some of which Jemez Pueblo considers secret, but that, for secrecy reasons, other Tribes did not disclose their place names); Pueblo of Jemez Expert Witness Rebuttal Reports to Dr. Anschuetz by Dr. Liebmann, Dr. Ferguson, Dr. Klara Kelley and Dr. Veronica Tiller at 15 (undated), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 195 ("Liebmann et. al. Rebuttal Reports")("The use of the VCNP by tribes other than the Pueblo of Jemez, as documented by Anschuetz . . . ."). Furthermore, Ferguson recognized that Jemez Pueblo's case against the United States, and subsequent desire to provide the Court with historic and present Valles Caldera use information, is why Jemez Pueblo broke its secrecy traditions surrounding its religious practices. See Nov. 6 Tr. at 1897:14-21 (Ferguson). Ferguson acknowledged that other Tribes engage in similar Valles Caldera use, which they are also reluctant to disclose, and deferred to Anschuetz on matters relating to Zia Pueblo and Santa Clara Pueblo, specifically Anschuetz' notes of interviews with Santa Clara Pueblo member Tito Naranjo, yet disputed Anschuetz' conclusion that the Valles Caldera is a commons, largely because Jemez Pueblo provided Ferguson with ninety place names, which is more place names than other Tribes provided to Anschuetz. See, e.g., Nov. 6 Tr. at 1963:18-1964:10 (Ferguson), id. at 1996:2-8 (Ferguson); Anschuetz Rebuttal Report at 40-41; Liebmann et. al. Rebuttal Reports at 15. The Court concludes, therefore, that merely aggregating place names is an inadequate method to determine whether Jemez Pueblo used the Valles Caldera to a degree greater than the other Tribes that have asserted similar Valles Caldera use.

See, e.g., Anschuetz Report at 163-91 (discussing numerous Tribes' pilgrimages, ceremonies, shrines, pathways, and agricultural and cultural practices within the Valles Caldera); id. at 191 ("Members of several affiliated communities, including Zia, Santa Clara, San Ildefonso, and Kewa are known to have gathered varied plant resources, hunted game animals, harvested birdfeathers, and collected rocks and minerals in the Valles Caldera.").

61. The Jemez Mountains' major drainages that lead into the Valles Caldera, such as El Rito de los Frijoles and Santa Clara Canyon, facilitated Keres and Tewa peoples' access to the Valles Caldera's natural and cultural resources. See, e.g., Nov. 6 Tr. at 1993:4-1995:4 (Marinelli, Ferguson)(confirming that Ferguson has no reason to dispute Naranjo's account of Santa Clara Pueblo's Valles Caldera use); Anschuetz Rebuttal Report at 12 ("Consideration of the concentration of a large number of Tewa people at the settlements of Puye (LA[27] 47, with ca. 1,600 rooms) and Pueblo de las Estrellas ([redacted], with ca. 1,600 rooms) in Santa Clara Canyon in the Northern Pajarito archaeological district is also instructive."); id. at 27 ("Given the cultural importance of the Valles Caldera's Redondo Peak, Valles Rhyolite obsidian source at Cerro del Medio, and the Piki[28] Stone Quarry in the [redacted], . . . diverse Pueblo communities . . . journeyed long distances . . . to collect spiritually powerful resources associated

[27]An "LA number" refers to an "archeological site number." Expert Report of Rory Gauthier at 9 (March 22, 2018), admitted October 29, 2018, as United States' Ex. DX-RR.

[28]"The word Piki is Hopi in origin, called paper bread in Jemez Pueblo, and is still made on some of the New Mexico Pueblos. . . . Piki is traditionally made on a Piki stone." Piki Bread, ieveryware.com, http://ieveryware.com/layout/mobilecontent2/1a382ae560c94956a6bd03414efac504/95386809901e4331afae45b112e2058e/c8c6a8ece5874a7cb17465ff3a788082/a0643490bf184eda83d07e58f34f4a59/1 (last visited August 26, 2019).

with the Valles Caldera."); id. at 28 (depicting Euclidian[29] distances from modern Pueblos to Valles Caldera resource sites); id. at 30-32 (depicting Euclidian distances from ancestral pueblo sites to Redondo Peak, Cerro del Medio, and [redacted]); Interview Notes with Tito Naranjo by Kurt F. Anschuetz, Ph.D.[30] at 6 (dated 2011), admitted October 29, 2018, at trial as

[29]"In mathematics, the Euclidean distance or Euclidean metric is the 'ordinary' straight-line distance between two points." Euclidean distance, Wikipedia, https://en.wikipedia.org/wiki/Euclidean_distance (last visited May 2, 2019).

[30]Jemez Pueblo asks the Court to find that "multiple members of Santa Clara Pueblo described the pueblo's traditional use areas as outside of the Claim Area" based, in part, on Anschuetz' interview with Naranjo, in which, according to Jemez Pueblo,

> Naranjo identifies Santa Clara's central areas of importance, which all fall outside of the Claim Area. When discussing place names and the intimacy of Santa Clara's relationship with the landscape and its watershed, Naranjo states, "[w]e learned the entire canyon system all the way up [from Santa Clara Pueblo] . . . to the northeast side of the Valles Caldera." . . . When discussing Jemez Mountain uses, Mr. Naranjo identifies the upper reaches of the Santa Clara Creek Canyon watershed as a pinon gathering location and Tsikumu, which Mr. Naranjo states is Santa Clara's "Mountain of the West" and is outside of the Claim Area. . . . Mr. Naranjo identifies Santa Clara's hunting areas outside of the Claim Area on the Pajarito Plateau and the Santa Clara watershed and surrounding vicinity. . . . Mr. Naranjo describes Santa Clara's traditional farming areas as the "Rio Grande bottomlands," the Pajarito Plateau, Puye, and Shufinne in Santa Clara Canyon, and again all of which are outside of the Claim Area. . . . Mr. Naranjo describes Santa Clara's traditional use area as "the entire canyon system all the way up . . . to 'Where All The Springs End' on the northeast side of the Valles Caldera."

Jemez Pueblo' Proposed Findings ¶ 599, at 186-88 (quoting Final Report: Perspectives on Managing Multi-Cultural Landscapes: Use, Access, and Fire/Fuel Management Attitudes and Preferences of User Groups Concerning the VCNP and Adjacent Areas by Kurt Anschuetz at 153 (dated Feb. 10, 2014), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 48)("Managing Multi-Cultural Landscapes"); id. at 419; id. at 428-29; id. at 448; id. at 458). The Court concludes that Naranjo's statements indicate merely that Santa Clara Pueblo has sacred, traditional-use areas outside the Valles Caldera. The Court notes that Naranjo elsewhere in the same report indicates that Santa Clara Pueblo has many sacred areas within the Valles Caldera. See, e.g., Managing Multi-Cultural Landscapes at 154 ("Naranjo went into the Valles Caldera to hunt, fish, and hike, as well as to participate in (unspecified) cultural activities. The Valles Caldera

United States' Ex. DX-MG ("Naranjo Interview Notes")(describing Santa Clara Pueblo's Valles Caldera resource use for cultural and religious purposes).

62. Santa Clara Canyon contains two historic pueblos totaling approximately 3,200 rooms within a few miles of the Valles Caldera. See, e.g., Nov. 29 Tr. at 4554:23-4558:22 (Marinelli, Anschuetz)(describing Tewa and Keres room counts, and population estimates, in locations near the Valles Caldera); Anschuetz Rebuttal Report at 12 ("Consideration of the concentration of a large number of Tewa people at the settlements of Puye (LA 47, with ca. 1,600 rooms) and Pueblo de las Estrellas ([redacted], with ca. 1,600 rooms) in Santa Clara Canyon in the Northern Pajarito archaeological district is also instructive.")

63. The Jemez Mountains Keres and Tewa Pueblos no longer occupy their ancestral Jemez Mountain homes, although these homes continue to play a significant role in their cultural heritage. See, e.g., Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana at 1 (including various Jemez Mountains sites to support Zia, Jemez, and Santa Ana's land claim before the ICC); Naranjo Interview Notes at 4-5 (identifying and discussing Jemez Mountains places known to Santa Clara Pueblo); Pino Interview Notes at 1-4 (discussing Zia Pueblo's historic settlements in the Jemez Mountains and along the Jemez River); Interview with Governor Carl Brent Schildt, Lt. Governor Jerome Lucero, and Francisco Toribio, with Joseph A. Little, Esq.,

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is important to the people of Santa Clara Pueblo '[b]ecause there were shrines, . . . medicine plants in there, and . . . animals there that we need.'" (quoting Tito Naranjo)); id. ("Naranjo states that now that the Valles Caldera is owned by the U.S., he hopes that the people of his Pueblo, as well as the members of the other affiliated Tribes, will regain access to this landscape to harvest the medicine plants, minerals, and animals that they need back home."). The Court, therefore, will not adopt the proposed fact.

and Lisa A. Franceware, Esq., Pueblo of Zia (dated Nov. 11, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-RI ("Zia Pueblo Interviews").

a. Agriculture.

64. Tree-ring dating of architectural wood, radiocarbon dating, and thermoluminescence dating of ceramics establish that Jemez Pueblo initially occupied its ancestral agricultural sites beginning in the late 1200s and early 1300s C.E. See Oct. 30 Tr. at 363:11-364:6 (West, Liebmann)(discussing archeological dating methods); id. at 370:12-25 (West, Liebmann); Liebmann Report at 9 ("All these farmsteads date to the centuries between 1300-1700 C.E."); id. at 14 ("Jemez Black-on-white pottery[31] serves as the diagnostic calling card of all ancestral Jemez settlement, on and off the VCNP, between 1300-1680 C.E.").

65. Ancestral Jemez agricultural activities provided food for dozens of ancestral Jemez Pueblo villages in northern Rio Jemez watershed's canyons and nearby mesa tops. See, e.g., Oct. 30 Tr. at 447:16-448:12 (West, Liebmann); Liebmann Report at 10-12.

66. Between 1300 and 1700 C.E., ancestral Jemez people built thirty-five villages and thousands of fieldhouses in the northern Rio Jemez watershed. See, e.g., Nov. 6 Tr. at 1796:18-1797:22 (Ferguson)(affirming that ancestral Jemez Pueblo people spent part of each year farming within the Valles Caldera); Liebmann Report at 6.

[31]"Named for its characteristic black painted designs on an oyster-white slipped background, Jemez Black-on-white pottery is found in large quantities at all ancestral Jemez sites occupied between 1300-1680." Liebmann Report at 14. Jemez Black-on-white pottery "was not produced in any other region or by any non-Jemez pueblos (*e.g.*, the ancestral Keres or Tewa Pueblos located to the east and south of the VCNP)." Liebmann Report at 6 (footnotes omitted).

67. Ancestral Jemez people occupied their fieldhouses for at least ninety days[32] during growing seasons.[33] See Oct. 30 Tr. at 453:23-25 (Liebmann)("You're not going to build a fieldhouse for agricultural purposes unless you have at least 90 frost-free days in order to grow corn."); id. at 459:4-8 (Liebmann).

68. Ancestral Jemez Pueblo members occupied their fieldhouses not only for agricultural purposes, but also to hunt, to gather, to move about the landscape, and to demarcate territory.[34] See, e.g., Oct. 30 Tr. at 448:4-24 (Liebmann)(characterizing Jemez Pueblo's ancestral

[32]A field's life does not limit a fieldhouse's life, because a single fieldhouse could serve multiple, rotating fields. See Dec. 13 Tr. at 5615:7-13 (Liebmann).

[33]Jemez Pueblo asks the Court to find that ancestral Jemez people occupied their fieldhouses "during the growing seasons between 90 and 120 days," Jemez Pueblo's Proposed Findings ¶ 294, at 105 (citing Oct. 30 Tr. at 447:19-448:17 (West, Liebmann); id. at 453:17-25 (Liebmann); id. at 459:2-8 (Liebmann); id. at 365:12-14 (Liebmann); id. at 459:4-8 (Liebmann); Nov. 6 Tr. 1797:15-20 (Ferguson); Ferguson Report at 55); however, the cited evidence supports only that Pueblo members occupied their fieldhouses for at least ninety days, see, e.g., Oct. 30 Tr. at 453:23-25 (Liebmann)("You're not going to build a fieldhouse for agricultural purposes unless you have at least 90 frost-free days in order to grow corn."), and the Court, therefore, does not adopt the proposed fact.

[34]Jemez Pueblo asks the Court to find that "no archeological evidence of architecture . . . would indicate another tribe lived in the Claim Area, and the Jemez people were the only tribal people to occupy the Claim Area." Jemez Pueblo's Proposed Findings ¶ 298, at 105. The evidence amassed at trial, however, does not support this proposed fact. See Oct. 31 Tr. at 615:24-616:3 (Marinelli, Liebmann)(acknowledging that Navajo hogans -- tradition Navajo dwelling structures -- along the ridge bordering the Valle Toledo in the Valles Caldera's northeast section indicate occupation); id. at 459:12-14 (Liebmann)("Some people would call -- some shrines, they would classify those as architecture."); Oct. 30 Tr. at 560:10-20 (Marinelli, Liebmann)(affirming that, when Liebmann uses the phrase "exclusive occupation," he's "referring solely to the fieldhouses on the Banco Bonito," and that such fieldhouses are located in the Valles Caldera's "very southwest corner"); Trial Transcript at 3121:14-19 (taken Nov. 13, 2018), filed January 30, 2019)(Doc. 353)("Nov. 13 Tr.")(Steffen)("So we agree that there are approximately 100 fieldhouses on the Banco Bonito inside the Preserve, and the area where they're found is upon just over 1,000 acres on the Banco Bonito, which comes out to just over 1% of the Preserve. It's a tiny part of the Preserve."); id. at 3124:8-11 (Steffen)("[T]here are portions of Preserve that haven't been surveyed. And there could be something that people don't know about."); This Enchanted Land -- The Jemez Mountain

fieldhouses as summer homes); Liebmann Report at 10-11 (asserting that ancestral Jemez people constructed fieldhouses on the Banco Bonito to mark their territory).

69. Jemez Pueblo occupied the 100 fieldhouses on the Banco Bonito throughout a 400-year period, most of which Jemez Pueblo occupied between 1500-1650 C.E.[35] See Oct. 30 Tr. at 447:4-14 (West, Liebmann); Trial Transcript at 5770:9-11 (taken Dec. 13, 2018), filed February 19, 2019 (Doc. 366)("Dec. 13 Tr.")(Liebmann)("I don't believe that every one of those 100 fieldhouses was used for the entire 400 years."); Liebmann Report at 9-10.

70. Banco Bonito's southwest orientation results in abundant direct sunlight that facilitates favorable growing conditions. See, e.g., Dec. 13 Tr. at 5615:7-13 (Ferguson); Ferguson Report at 100-01.

Wonderland -- Los Alamos Scientific Laboratory at the University of California at 4 (dated Sept., 1961), admitted October 29, 2018, at trial as United States' Ex. DX-CV ("The longtime range manager [John Davenport] also recalls discovering Navajo hogans along a ridge bordering Valle Toledo in the Northeast section of the location."). The Court, therefore, will not adopt this proposed fact.

[35]Jemez Pueblo asks the Court to find that, "[l]ooking at the archaeological record of the Claim Area prior to 1800s, the only evidence of architecture is of about 100 Jemez fieldhouses located in Banco Bonito in the southwest of the Claim Area." Jemez Pueblo's Proposed Findings ¶ 293, at 105. The record before the Court, however, does not support the proposed fact. See, e.g., Oct. 31 Tr. at 615:24-616:3 (Marinelli, Liebmann)(acknowledging that Navajo hogans along the ridge bordering the Valle Toledo in the Valles Caldera's northeast section indicate occupation); id. at 459:12-14 (Liebmann)("Some people would call -- some shrines, they would classify those as architecture."); This Enchanted Land -- The Jemez Mountain Wonderland -- Los Alamos Scientific Laboratory at the University of California at 4 (dated Sept. 1961), admitted October 29, 2018, at trial as United States' Ex. DX-CV ("The longtime range manager [John Davenport] also recalls discovering Navajo hogans along a ridge bordering Valle Toledo in the Northeast section of the location."). The Court will not, therefore, adopt this proposed fact.

71. Tewa people occupied a high-elevation farm in the Jemez Mountains that dates to the early 1700s. See, e.g., Trial Testimony at 4596:1-4597:4 (taken Nov. 29, 2018), filed February 18, 2019 (Doc. 361)("Nov. 29 Tr.")(Marinelli, Anschuetz); Anschuetz Report at 190-91; This Enchanted Land -- The Jemez Mountain Wonderland -- Los Alamos Scientific Laboratory at the University of California at 4 (dated Sept. 1961), admitted October 29, 2018, at trial as United States' Ex. DX-CV.

72. Jemez Pueblo's farming in the Valles Caldera's vicinity before 1700 C.E. was not unique given that other Pueblos supported themselves in the same manner. See Trial Transcript at 4724:23-4727:5 (taken Nov. 30, 2018), filed February 18, 2019)(Doc. 362)("Nov. 30 Tr.")(Marinelli, Anschuetz)(discussing data which shows that Tewa peoples harvested Valles Caldera obsidian to make tools and maintained high-elevation fieldhouses in the Valles Caldera's vicinity); id. at 4745:1-13 (Marinelli, Anschuetz)(affirming that Pueblos other than Jemez Pueblo use the Valles Caldera to gather plants, animals, minerals, and water, among other things); id. at 4554:23-4562:8 (Marinelli, Anschuetz)(describing how Tewa and Keres room counts and likely populations in settlements near the Valles Caldera exceeded Jemez Pueblo's population); Anschuetz Report at 47-48 (mapping Pueblos' proximity to a major Valles Caldera obsidian source).

73. Ancestral Keres and Tewa peoples, as well as members of other Pueblos and Tribes, routinely travelled four miles or more into the Valles Caldera from their fieldhouses and permanent villages to hunt game, to gather native plants, to collect obsidian, and to conduct other traditional practices. See, e.g., Anschuetz Report at 168 (discussing multiple Pueblos' traditional pilgrimages and practices within the Valles Caldera); id. at 178 (noting Zia Pueblo's continued Valles Rhyolite

obsidian use); id. at 184 ([redacted], and discussing a survey that samples twenty-one Pueblos' and Tribes' Valles Caldera and Jemez Mountains plant use); id. at 185-86 (discussing Zia, Jemez, Santa Clara, and Santa Ana Pueblos' hunting practices within the Jemez Mountains, including on Redondo Peak), id. at 187-88 (discussing Zia Pueblo's, Jemez Pueblo's, and Santa Ana Pueblo's [redacted]); Nov. 29 Tr. at 4586:6-19 (Marinelli, Anschuetz)(discussing various Pueblos' pilgrimages and ceremonies within the Valles Caldera); Anschuetz Rebuttal Report at 27 (discussing the Pueblos' willingness to travel "long distances during pilgrimages or expeditions to collect spiritually powerful resources associated with the Valles Caldera").

74. Most Pueblos and Tribes did not have to pass Jemez villages to access and use the Valles Caldera.[36] See, e.g., Nov. 6 Tr. at 1920:7-1921:16 (Marinelli, Ferguson)(conceding that Santa Clara and San Ildefonso Pueblos, and possibly Cochiti Pueblo, would not have had to pass through Jemez Pueblo villages to access the Valles Caldera); Fogleman Report at 15 (displaying

[36]Jemez Pueblo's expert conceded this point at trial, and such a concession contradicts Jemez Pueblo's assertion that "[a] majority of visiting tribal groups would have to pass by, or near, the place of Jemez leadership and would typically seek permission for use in the Valles Caldera." Plaintiff Pueblo of Jemez's First Supplemental Objections and Answers to Defendant United States' First Set of Interrogatories at 3 (June 27, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-QX-7. The Court credits these pre-trial concessions rather than Jemez Pueblo's position at this stage in the proceedings. The Court notes that Tribes typically seek permission to access their respective Tribal domains, including Tribal trust lands. See, e.g., Trial Transcript at 1549:21-1550:18 (taken Nov. 5, 2018), filed January 11, 2019 (Doc. 342)(Chinana); Trial Transcript at 2670:19-2671:3 (taken Nov. 9, 2018), filed January 25, 2019 (Doc. 351)("Nov. 9 Tr.")(Madalena); id. at 2735:1-10 (Suina).

routes generated using least-cost-path analysis[37] from twelve present-day Pueblos to Redondo Peak, none of which pass through Jemez Pueblo[38]); Anschuetz Report at 15 (noting the Valles Caldera's and Jemez Mountains' location in relation to thirteen affiliated Pueblos and Tribes).

[37]"Cost path analysis is a . . . tool in Geographic information systems for finding an optimal route between two points through continuous space that minimizes costs. 'Cost' in this sense can have a number of connotations, including: actual monetary expenditure in construction, time and effort required to travel, and negative environmental impacts." Cost Path Analysis, wiki.GIS.com, http://wiki.gis.com/wiki/index.php/Cost_Path_Analysis (last visited May 2, 2019). "[T]he least-cost path is the path of least resistance." Least-cost path analysis, Hunter College Department of Geography and Environmental Science, http://www.geography.hunter.cuny.edu/~jochen/GTEC H361/lectures/lecture11/concepts/Least-cost%20path%20analysis.htm (last visited May 2, 2019).

[38]Fogleman initially denied that he wanted to use, but was unable to use correctly, a more sophisticated United States Geological Survey ("USGS") pedestrian evacuation tool that incorporates the impact of fatigue and land cover on travel times, and, when examined at trial, contradicted his denial after counsel for the United States presented him with his email to USGS seeking assistance with his analysis less than three weeks before his expert report was due. See Oct. 29 Tr. at 58:11-63:24 (Marinelli, Fogleman); Email from William Fogleman to Jeanne Jones, USGS (dated March 5, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-UC. The Court declines to join Fogleman's conclusion that Least Cost Path analysis proves that Jemez Pueblo was the Valles Caldera's dominant user, in part, because Fogleman's analysis does not include information about the way Tribes used the Valles Caldera, which would impact a given Tribe's desire to reach those lands, especially for religious purposes. See, e.g., Oct. 29 Tr. at 57:17-58:10 (Marinelli, Fogleman); id. at 117:25-118:20 (Marinelli, Fogleman)(affirming that Fogleman did not account for factors impacting Valles Caldera use); id. at 128:13-129:15 (Marinelli, Fogleman)(affirming that Fogleman did not consider transportation to and actual use of the Valles Caldera). Moreover, Fogleman did not incorporate land cover's impact on travel times through the Valles Caldera, which biased his model against the Pueblos of Santa Clara, Cochiti, and San Ildefonso, whose members pass through easily traversed meadows on their way to Redondo Peak. See, e.g., Oct. 29 Tr. at 58:11-63:24 (Marinelli, Fogleman)(affirming that Fogleman's analysis does not include land cover); id. at 83:14-20 (Johnson, Fogleman)(asserting that the Valle Grande is a flat, open meadow); id. at 98:22-99:16 (Johnson, Fogleman)(affirming that land cover can make a significant difference in travel time), id. at 120:12-122:3 (Marinelli, Fogleman)(affirming that the Pueblos other than Jemez, Zia, and Santa Ana would likely travel through meadows, which take less time to walk through than forests); Nov. 9 Tr. at 2740:15-2742:3 (Marinelli, Suina)(confirming non-Jemez Pueblo village just outside the Valles Caldera's southeast corner); Fogleman Report at 17 (depicting present-day Pueblos' Least Cost Path analysis to Redondo Peak). Fogleman's data set did not include non-Jemez Pueblo ancestral villages that are closer to the Valles Caldera than Jemez Pueblo's ancestral villages, including a non-Jemez

Pueblo village located within Baca Location No. 1. See, e.g., Oct. 29 Tr. at 113:18-117:20 (Marinelli, Fogleman)(stating that John Roney provided Fogleman with an ancestral Pueblo data set that excluded non-Jemez Pueblos); Report for Jemez Preserve Claim at 17-18 (dated Oct. 13, 2017), admitted October 31, 2018, at trial as United States' Ex. DX-UE (identifying non-Jemez Pueblo locations just outside the Valles Caldera's southeast corner); Gauthier Rebuttal Report at 12, 17 (mapping sites that Fogleman did not include in his expert report); Anschuetz Rebuttal Report at 11 (describing two non-Jemez Pueblos within 3.4 miles of the Valles Caldera boundary); id. at 31-32 (mapping sites that Fogleman did not include in his expert report).

Fogleman's analysis measures only the distance from Pueblos to the top of Redondo Peak, and thereby excludes the fact that: (i) other ancestral and present-day Pueblos are closer in terms of both straight-line distance and actual travel time to other Valles Caldera sites; and (ii) Jemez Pueblo's return trip from Redondo Peak crosses terrain rougher than the terrain that other Pueblos would cross on their return trips, because Jemez Pueblo faces the steepest downslope. See, e.g., Oct. 29 Tr. at 89:24-91:3 (Johnson, Fogleman)(describing Fogleman's basis for choosing Redondo Peak as his sole reference point); id. at 93:4-15 (Johnson, Fogleman)(asserting that Fogleman cannot provide opinion evidence whether other Pueblos' Valles Caldera use was less frequent than Jemez Pueblo); id. at 95:17-21 (Johnson, Fogleman)(asserting that downward slopes greater than five percent slow travel); id. at 122:4-124:5 (Marinelli, Fogleman)(affirming that Fogleman's analysis examined only travel to Redondo Peak and did not consider the impact that the steep, downward slope between Jemez Pueblo and Redondo Peak has on downhill travel time); id. at 126:19-127:19 (Marinelli, Fogleman)(affirming that Fogleman's analysis did not consider the impact that the steep, downward slope between ancestral Jemez Pueblo villages and Redondo Peak had on downhill travel time). Furthermore, Fogleman based his conclusions regarding Jemez Pueblo's dominance over the Valles Caldera from 1300 C.E. to 1700 C.E. on villages that Jemez Pueblo did not consistently occupy, and he did not account for the likelihood that the nearby, larger non-Jemez Pueblo population would have used the Valles Caldera. See, e.g, Oct. 29 Tr. at 113:3-15 (Marinelli, Fogleman); id. at 135:18-137:4 (Marinelli, Fogleman)(affirming that unoccupied Jemez Pueblo villages could not contribute to Jemez Pueblo's Valles Caldera use); Liebmann Report at 11-12 ("The only large pueblos located within a 6.5 km radius of the Banco Bonito fieldhouses are the ancestral Jemez pueblos known as Hot Springs Pueblo ([redacted]), Unshagi ([redacted]), and Nanishagi [redacted]), occupied between 1300-1630 C.E."); id. at 43 (asserting that Jemez Pueblo ceased occupying Nanishagi in 1500 C.E. and ceased occupying Unshagi in 1605 C.E.); Michael L. Elliott, Overview and Synthesis of the Archeology of the Jemez Province, NM at 179 (dated 1986), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 122 (stating that Jemez Pueblo ceased occupying Hot Springs Pueblo in 1500); Anschuetz Rebuttal Report at 30-36 (illustrating various Pueblos' sizes). That Jemez Pueblo is geographically closer than other Pueblos to Redondo Peak does not prove that Jemez Pueblo was Redondo Peak's or the Valles Caldera's dominant user, as Fogleman concludes, just as other Pueblos' geographic proximity to other sites within the Valles Caldera does not prove that those Pueblos were those sites' dominant users. See, e.g., Oct. 29 Tr. at 125:13-126:18 (Marinelli, Fogleman)(admitting that Fogleman's conclusion regarding Jemez Pueblo's dominance is based on minimal differences in theoretical travel times to Redondo Peak); id. at 130:4-133:17 (affirming that other Pueblos are closer to areas

b. Ceramics.

75. People from the Keres, Tewa, and Towa language groups historically used the Valles Caldera.[39] See, e.g., Trial Transcript at 2363:23-2364:1 (taken Nov. 8, 2018), filed January 22, 2019 (Doc. 350)("Nov. 8 Tr.")(Leonard, Gauthier)("Based on the archaeological data, primarily the ceramic evidence that three groups were using the Valles Caldera. And these are Tewa, Keres, and Towa -- the artifacts that I looked at."); Gauthier Report at 3 ("Ceramic types found within the boundaries of the VCNP are affiliated with a number of these pueblos including Keres, Tewa and Towa villages. Ceramic evidence indicates pueblo use of the VCNP beginning in the mid 1200s C.E. until the mid 1700s C.E.").

within the Valles Caldera than Jemez Pueblo); id. at 133:18-134:1 (Marinelli, Fogleman)(affirming that, if Fogleman had conducted a Least Cost Path analysis to Cerro del Medio and a cultural site in the Valles Caldera's northeast quadrant, the analysis "would indicate that non-Jemez pueblos are closer" to those sites); Nov. 30 Tr. at 4735:21-4743:20 (Marinelli, Anschuetz)(asserting that analyzing only travel to Redondo Peak is unreasonable, because Tribes used other areas within the Valles Caldera); Fogleman Report at 16 (stating travel-time and route characteristics for Least Cost Path analysis for present-day Pueblos to Redondo Peak); Anschuetz Rebuttal Report at 27-33 (identifying Valles Caldera areas closer to Pueblos other than Jemez Pueblo and indicating that Jemez Pueblo is only slightly closer than nearby Pueblos to Redondo Peak).

[39]Ceramics evidence supports this fact, because archaeologists are able to use each language group's pottery's unique attributes, such as decoration, to identify who manufactured a given ceramic artifact. See Nov. 8 Tr. at 2364:9-2365:5 (Leonard, Gauthier).

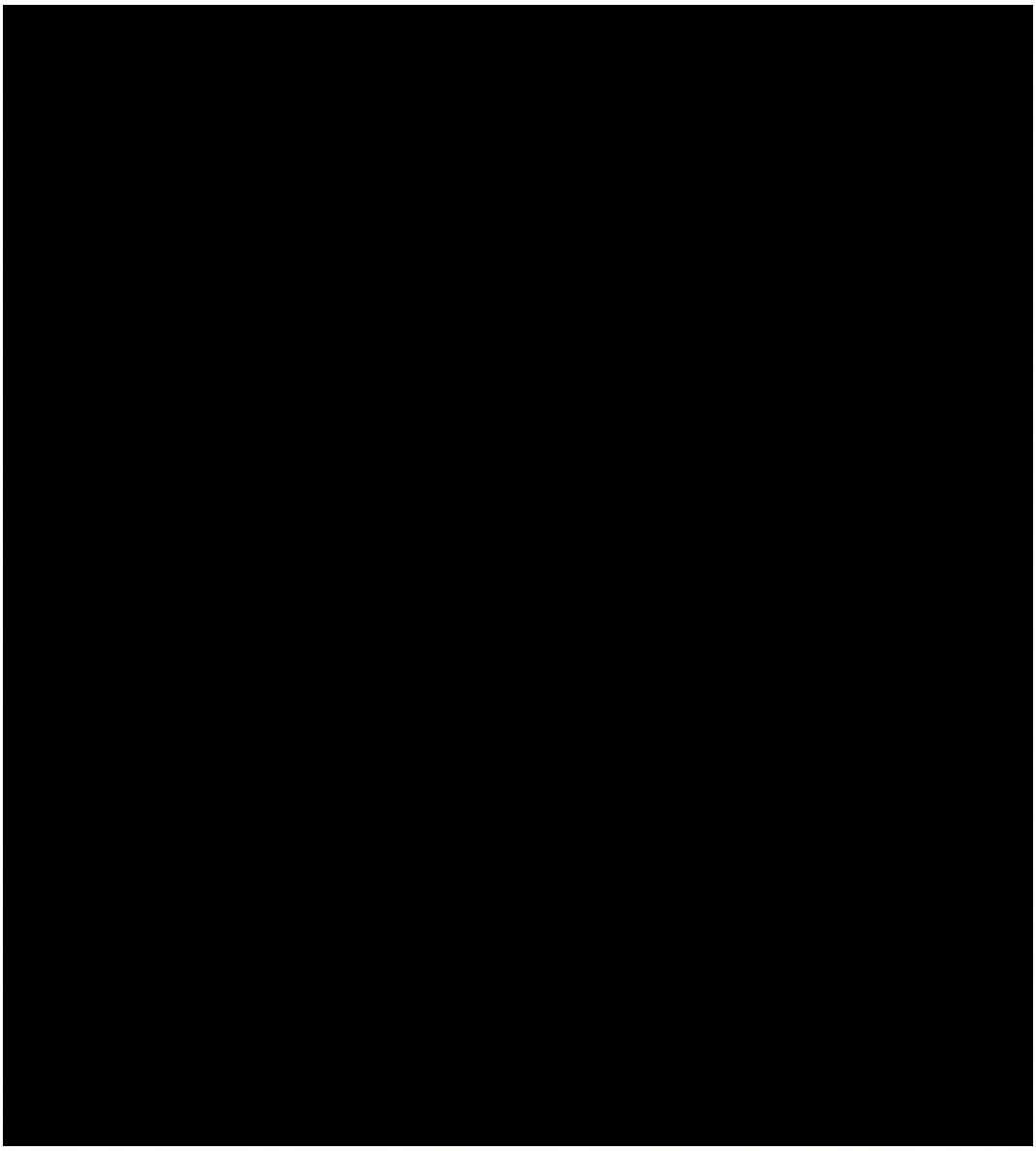

Figure 7. Valles Caldera Archaeological Sites with Cultural Affiliation Based on Ceramic Types

76. Archaeologists study ceramics and pottery sherds from as early as the fourteenth century to better understand the ethnic groups associated with archeological remains. See, e.g., Nov. 8 Tr. at 2325:5-15 (Gauthier)("Archaeologists -- we study ceramics, because there are a variety of reasons. First of all, they contain a lot of history."); Liebmann Report at 16 (discussing Tewa, Keres, and Jemez Pueblo pottery sherds dating between 1300 through 1680 C.E.).

77. Because ceramic sherds are virtually indestructible, they maintain many of their identifying characteristics over time, and archeologists use those characteristics, which include clay/paste attributes, temper material, paint type, paint design, and surface finish, to determine where a sherd was made, who made it, and its age. See, e.g., Nov. 8 Tr. at 2325:13-19 (Gauthier)("If you look at a sherd, it can give you information of where it was made, who it was made by, and also when it was made. Besides all that information, they are virtually indestructible."); Gauthier Report at 1 (discussing sherds historical importance to archeologists).

78. From approximately 1300 to 1680 C.E., Jemez Pueblo produced a distinctive form of decorated pottery known as Jemez Black-on-white, which was not produced in any other region or by any non-Jemez pueblos. See Oct. 30 Tr. at 377:24-378:6 (Liebmann)("So Jemez Black-on-white is the pottery that occurs throughout the ancestral Jemez region. That was pottery that was produced by ancestral Jemez peoples between roughly 1300 and 1680, and it kind of serves for archaeologists as the diagnostic signature of ancestral Jemez people.").

79. Archeologist have found on [redacted] sherds containing anthill temper,[40] which establishes that there was thirteenth-century Keres and Tewa Valles Caldera use given that antihill temper dates most commonly from 1250 to 1350 C.E. and occurs in only the Pajarito Plateau, which was home to ancestral Keres and Tewa people. See Nov. 8 Tr. at 2331:22-2332:2

[40]"Temper" refers to material, such as quartz and mica, that potters add to clay to prevent a ceramic piece from cracking when fired, and "anthill temper" refers to temper containing quartz crystals that ants brought up from subsurface layers and which potters subsequently harvested. See Nov. 8 Tr. at 2329:18-22 (Gauthier)("[A]nts, when they're digging their little burrows in the ground, they bring up quartz crystals. And pueblo potters would collect the materials off the anthills, and crush that up, and add that to the clay.").

(Gauthier)("This type of ceramic is very common on the Pajarito Plateau. And I already said the dates, 1250 to 1350. It is a very good ethnic marker based on the temper type that is found in this pottery. And it is ancestral Tewa, or ancestral Keres."); Log 3962; Site None; VCNP Artifact: A12-7508-001 (undated), admitted November 8, 2018, at trial as United States' Ex. DX-TG (image depicting "Pajarito Utility" sherd).

80. Micaceous pottery, i.e., pottery in which potters use mica as a temper material, is not Jemez Pueblo's, because mica does not occur naturally in the Jemez Mountains, but rather in areas near Taos and Picuris Pueblos, and north of the Jemez Mountains in the Rio Chama Valley. See Oct. 30 Tr. at 583:21-23 (Liebmann)("I'll stipulate. I don't know of any evidence of Jemez people using mica to temper their pottery."); id. at 584:3-19 (Marinelli, Liebmann)(observing that micaceous pottery found within the Valles Caldera "could be Tewa, they could be Kewa, so they could be coming from Picuris or Taos"); Nov. 8 Tr. at 2339:8-2340:19 (Gauthier)("[Mica] does not occur naturally in the Jemez Mountains, but it occurs naturally north of Jemez Mountains, up in the Rio Chama Valley and also over at the area of Taos and Picuris . . . . It is indicative of Tewa pottery.").

81. Archeologists have found near [redacted], within the Valles Caldera, pre-Pueblo Revolt of 1680[41] ("Pueblo Revolt") micaceous pottery sherds, which date from 1450-1550 C.E.

[41]"The Pueblo Revolt of 1680 . . . was an uprising of most of the indigenous Pueblo people against the Spanish colonizers in the province of Santa Fe de Nuevo México, present day New Mexico. The Pueblo Revolt killed 400 Spanish and drove the remaining 2,000 settlers out of the province." Pueblo Revolt, Wikipedia, https://en.wikipedia.org/wiki/Pueblo_Revolt (last visited May 3, 2019). The archeological record indicates that Tewa and Towa Pueblos did not exchange pottery before the Pueblo Revolt, see Nov. 8 Tr. at 2388:16-2389:6 (Leonard, Gauthier), which suggests that Jemez Pueblo and Tewa people had little contact before 1680, see Oct. 30 Tr. at 393:14-394:4 (West, Liebmann); id. at 407:12-14 (Liebmann)("There is only 3% of what we

and are indicative of Tewa cultural affiliation. See Nov. 8 Tr. at 2339:25-2340:15 (Leonard, Gauthier)(affirming sherd 2401's Tewa cultural affiliation); Log 2401; Site S00-076/[redacted]; VCNP Artifact: A08-0229-001 (undated), admitted November 6, 2018, at trial as United States' Ex. DX-TC (image depicting "Sapawe Micaceous" sherd).

82. Jemez peoples left Jemez Black-on-white ceramics evidence throughout the Valles Caldera, which indicates that ancestral Jemez Pueblo members used the Valles Caldera from approximately 1300 C.E. to at least the Pueblo Revolt in 1680 C.E. and thereafter. See, e.g., Dec. 13 Tr. at 5546:7-12 (Liebmann); Liebmann Report at 16.

83. Before 1700 C.E., Keres and Tewa members produced distinctive pottery. See e.g., Gauthier Report at 12-14 (describing various ceramic types found within and adjacent to the Valles Caldera); id. at 17.

84. Many Tribes used the Valles Caldera lands before 1700 C.E., including Tewa and Keres peoples, who used the Valles Caldera's southeast and south-central areas between 1200 and at least 1750 C.E. See, e.g., Gauthier Report at 14-16 (discussing and dating Tewa and Keres

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call other decorated [pottery at ancestral Jemez Pueblo sites], which would generally be the trade wares that are coming from the other pueblos."); id. at 580:20-581:20 (Marinelli, Liebmann); Matthew Liebmann, Robert Preucel, and Joseph Aguilar, The Pueblo World Transformed: Alliances, Animosities, and Factionalism in the Northern Rio Grande, 1680-1700 at 147, in New Mexico and the Pimeria Alta; The Colonial Period in the American Southwest (John G. Douglas and William M. Graves eds., 2017)(pages 143-56 admitted December 13, 2013, at trial as United States' Ex. DX-QJ)("The Pueblo World Transformed")("The few interactions that did occur were probably bellicose. Relations between the Tewas and Jemez were reportedly so hostile prior to the Pueblo Revolt that in 1634, one Jemez leader proudly wore around his neck a string of human ears from the Tewa warriors he had killed."). Relations improved, however, and trade occurred, following the Pueblo Revolt. See The Pueblo World Transformed at 147 ("Jemez and Tewa people forged new relationships in the wake of the revolt, presumably as a result of Po'Pay's unification of the Pueblo's in 1680.").

archaeological sites in the Valles Caldera's Valle Grande and Cerro del Medio regions and in areas associated with historic Valles Caldera trails and obsidian access routes); id. at 17 ("The ceramic analysis has determined the presence of three separate pueblo groups within the VCNP.").

85. Archaeological sites affiliated with Tewa and Keres people are the most common cultural affiliations in the Valles Caldera's southeast and south-central areas, i.e., the Valle Grande, [redacted]. See, e.g., Nov. 8 Tr. at 2335:6-2336:25 (Leonard, Gauthier)(discussing Keres utility-ware sherd 4841 found at [redacted]); Gauthier Report at 7 (mapping sites by cultural affiliation, including Tewa-affiliated [redacted]); id. at 14; Log 4841; [redacted]; VCNP Artifact: A14-6289-001(undated), admitted November 8, 2018, at trial at United States' Ex. DX-TB (image depicting Keres sherd 4861).

86. Although archeologists predominantly have found Tewa-affiliated sherds in the Valles Caldera's southeast and south-central areas, archeologists have found such sherds as far west the Banco Bonito and Redondo Meadows. See, e.g., Nov. 8 Tr. at 2331:14-2332:2 (Leonard, Gauthier)(affirming that archeologists found sherd 3962 on [redacted]); id. at 2391:13-2393:5 (Leonard, Gauthier)(discussing Jemez and Tewa sherds found on the Banco Bonito and Keres and Tewa sherds found near [redacted]); Log 3962; Site None; VCNP Artifact: A12-7508-001 (undated), admitted November 8, 2018, at trial at United States' Ex. DX-TG (image depicting "pajarito utility" sherd 3962).

87. Archeologists have found Tewa ceramics dating as early as 1200 C.E. at [redacted].[42] See Gauthier Report at 7 (mapping sites by cultural affiliation, including Tewa-affiliated [redacted]; id. at 14 (noting that Tewa affiliated sites are "associated with the [redacted]); Spreadsheet Listing Sites by Laboratory of Anthropology Number, the Cultural Affiliation, Ceramic Types and Numbers Found on the Particular Site, Basic Notes and Date Assigned to the Archaeological Site at 1-2 (dated March 23, 2018), admitted November 8, 2018, at trial as United States' Ex. DX-RT ("Archeological Sites Spreadsheet")(listing ceramics' cultural affiliation and location).

88. Archeologists have found Tewa ceramics dating from the mid-fourteenth century in the Valles Caldera's Valle Grande. See, e.g., Gauthier Report at 7 (mapping sites by cultural affiliation, including Tewa-affiliated [redacted] in the Valle Grande); Archeological Sites Spreadsheet at 1-2.

89. Archeologists have identified Keres or Tewa -- but not Towa -- pottery at pre-Pueblo Revolt sites at [redacted]. See, e.g, Gauthier Report at 7 (mapping sites by cultural affiliation, including Keres- or Tewa-affiliated [redacted]); Archeological Sites Spreadsheet at 1-2.

[42]The United States asks the Court to find that [redacted]" United States' Proposed Findings ¶ 23, at 10. The United States provides no support for this assertion, which the Gauthier Report and Archeological Sites Spreadsheet do not reflect. The Court will not, therefore, adopt this proposed fact.

90. Tewa and Keres people have used the Valles Caldera since before the Pueblo Revolt. See, e.g., Nov. 8 Tr. at 2331:14-2332:2 (discussing Keres sherd found on [redacted]; id. at 2335:6-2336:25 (discussing Keres utility ware sherd found at [redacted]); Gauthier Report at 14-16 (discussing and dating Tewa and Keres archaeological sites in the Valles Caldera's Valle Grande and Cerro del Medio regions, and in areas associated with historic Valles Caldera trails and obsidian access routes).

91. Tewa, Keres, and Towa speakers all used the Valles Caldera's northern portion between 1200 and 1750 C.E.; Jemez Pueblo was not the Valles Caldera's northern portion's dominant Tribal user. See, e.g, Gauthier Report at 5-8 (mapping sites by cultural affiliation, including Keres-affiliated [redacted], or Tewa-affiliated [redacted], and Towa-affiliated [redacted]); id. at 14-17 (discussing and dating Tewa, Keres, and Towa archaeological sites within the Valles Caldera).

c. Obsidian.

92. American Indian peoples collected obsidian from the Jemez Mountains, including the Valles Caldera's obsidian sources, from before 10,000 B.C.E. to after 1600 C.E.[43] See, e.g., Trial Transcript at 3050:16-19 (taken Nov. 13, 2018), filed January 30, 2019)(Doc. 353)("Nov. 13

[43]The United States asks the Court to find that American Indian peoples used Jemez Mountains obsidian "from before 10,000 BC to at least 1900." United States' Proposed Findings ¶ 30, at 11 (citing Steffen Expert Report at 5). The cited evidence indicates only that American Indian peoples used Valles Caldera obsidian "after 1600 AD." Steffen Expert Report at 5 ("It is clear that Native peoples collected and used obsidians from the Jemez Mountains throughout all temporal period -- from before 10,000 BC to after 1600 AD."). The Court, therefore, will not adopt the proposed fact.

Tr.")(Marinelli, Steffen)("I believe, that look at sourcing of very, very old artifacts, Paleoindian[44] artifacts, the source is the Jemez Mountains."); id. at 3052 ("And so where you see the word 'Folsom,' in 2002, the one that says New Mexico obsidian Folsom artifacts, it's quite old, over 9,000 years old."); Subject Matter of Expert Testimony, Summary of Facts and Opinions and Report by Dr. Anastasia Steffen[45] at 7-12 (dated March 23, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-RV ("Steffen Report")(describing data which show that prehistoric people used Jemez Mountains obsidian sources for thousands of years before ancestral Puebloan communities developed).

93. The Jemez Mountains' three main obsidian sources are Cerro del Medio, Cerro Toledo, and El Rechuelos. See Steffen Report at 4 (identifying Jemez Mountains obsidian sources).

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[44]"Paleoindian" refers to one of four chronologic periods, and "goes back to before 10,000 years before the common era, through about 7,000 years before common era." Nov. 13 Tr. at 3080:5-13 (Steffen).

[45]Ana Steffen is an expert in stone tools and Jemez Mountain obsidian, and has over two decades experience using X-Ray fluorescence to match obsidian samples to geological formations. See Nov. 13 Tr. at 3038:5-3041:2 (Marinelli, Steffen)(discussing Steffen's education and experience working with obsidian); id. at 3043:16-3045:1 (Marinelli, Steffen)(describing Steffen's expertise in stone tool use and production); id. at 3064:15-3067:2 (Marinelli, Steffen)(discussing Liebmann's consultations with Steffen regarding Steffen's obsidian research expertise).

The United States asks the Court to find that Steffen "is by far the most credible expert on obsidian sourcing." United States' Proposed Findings ¶ 26, at 10 (citing Nov. 13 Tr. at 3038:5-3041:2 (Marinelli, Steffen); id. at 3043:16-3045:1 (Marinelli, Steffen)). The Court has reviewed the testimony that supports this view and determined that it stretches the testimony too far, although the Court does not doubt Steffen's expertise or credibility. See Subject Matter of Expert Testimony, Summary of Facts and Opinions and Report by Dr. Ana Steffen at 1 (March 23, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-RV.

94. The Cerro del Medio obsidian source is located entirely within the Valles Caldera, and the Cerro Toledo obsidian source extends beyond the Valles Caldera's northeastern and southeastern boundaries. See Nov. 13 Tr. at 3069:14-3071:25 (Marinelli, Steffen)(discussing Valles Rhyolite[46] obsidian locations within the Valles Caldera); Steffen Expert Report at 4.

95. American Indian peoples have used the Cerro del Medio obsidian source for over 10,000 years, which is many thousands of years before Jemez Pueblo arrived at its current location. See, e.g., Nov. 13 Tr. at 3080:24-3082:15 (Marinelli, Steffen)(noting that Cerro Del Medio obsidian is present throughout all recorded temporal periods, ranging from 10,000 B.C.E. to after 1600 C.E.); Trial Transcript at 624:1-13 (taken Oct. 31, 2018), filed December 20, 2018 (Doc. 339)("Oct. 31 Tr.")(Liebmann, Marinelli)(affirming that Liebmann does not conclude that Jemez Pueblo actively guarded the Cerro del Medio obsidian source).

96. The Cerro del Medio obsidian source and the Cerro Toledo Rhyolite sources are both "Tewa group" obsidian sources. E.g., Nov. 13 Tr. at 3075:10-25 (Marinelli, Steffen)("[T]he groups are geologic groups.[47] There is a Tewa group, Polvadera group, and Keres group."); Steffen Expert Report at 5 (identifying Valles Rhyolite and Cerro Toledo Rhyolite as within the "Tewa Group").

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[46]"Valles Rhyolite" refers to obsidian found within the Valles Caldera. See Nov. 13 Tr. at 3070:9-11 (Steffen)("The obsidian geological deposit is called Valles Rhyolite, named obviously for being inside the Valles Caldera.").

[47]In stratigraphy, the branch of geology concerned with the study of rock layers and layering, a geologic group "is a set of two or more formations that share certain lithological characteristics. A group may be made up of different formations in different geographical areas and individual formations may appear in more than one group." Stratigraphic unit, Wikipedia, https://en.wikipedia.org/wiki/Stratigraphic_unit#Group (last visited May 6, 2019).

97. Some Pueblo peoples who used Cerro Toledo obsidian would have procured that obsidian from the Valles Caldera. See Oct. 31 Tr. at 621:5-18 (Marinelli, Liebmann).

98. Archeologists have found obsidian artifacts in the Valles Caldera that individuals made from obsidian sources outside the Valles Caldera. See Nov. 13 Tr. at 3052:18-3053:18 (Marinelli, Steffen).

99. Ancestral Jemez Pueblo members gathered their Cerro del Medio obsidian from the Valles Caldera.[48] See, e.g, Oct. 30 Tr. at 468:9-24 (Liebmann); id. at 469:17-19 (Liebmann); Matthew J. Liebmann,[49] From Landscapes of Meaning to Landscapes of Signification in the

[48]Archeologists know this fact because Cerro del Medio obsidian does not erode into secondary waterways, such as rivers and creeks. See, e.g, Oct. 30 Tr. at 468:9-24 (Liebmann); id. at 469:17-19 (Liebmann); Matthew J. Liebmann, From Landscapes of Meaning to Landscapes of Signification in the American Southwest, 82 American Antiquity 651, 642-61 (dated 2017), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 154.

[49]Matthew Liebmann conducted a study and led fieldwork to determine where ancestral Jemez Pueblo members collected obsidian. See Oct. 30 Tr. 461:7-12 (Liebmann); id. at 475-476:22-14; Matthew J. Liebmann, From Landscapes of Meaning to Landscapes of Signification in the American Southwest, 82 American Antiquity 642, 642-661 (2017), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 154 ("Landscapes of Signification"). Liebmann's research team collected and examined 2,222 obsidian flakes, or debitage, found at thirty-one large ancestral Jemez villages outside the Valles Caldera and then subjected the obsidian flakes to X-Ray Florescent Spectrometry ("XRF") examination. See Oct. 30 Tr. at 461:7-12 (West, Liebmann)(discussing Liebmann's obsidian data); id. at 465:2-22 (West, Liebmann)(describing XRF's ability to determine obsidian's elemental signatures); id. at 471:2-8 (West, Liebmann)("I relied on 2,222 pieces of obsidian that we collected from these sites."); Landscapes of Signification at 651 (describing Liebmann's sampling and methodology). Individuals create obsidian flakes by chipping at larger obsidian pieces, known as nodules, during the tool-making process. See Oct. 30 Tr. at 462:17-463:24 (West, Liebmann)(describing the obsidian tool-marking process). Liebmann focused on obsidian flakes because individuals who made obsidian tools, such as arrowheads, likely travelled to the quarry source versus trading something of value for an obsidian nodule or a finished obsidian artifact. See Oct. 30 Tr. at 464:2-465:1 (Liebmann); Landscapes of Signification at 652. XRF analysis enabled Liebmann to identify the specific obsidian quarry where ancestral Jemez Pueblo members obtained the flakes that Liebmann collected for his study. See Oct. 30 Tr. at 465:2-22 (West, Liebmann).

American Southwest, 82 American Antiquity 651, 642-661 (2017), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 154 ("Landscapes of Signification").

100. The simplest explanation for Cerro del Medio obsidian's widespread distribution is that various Tribes' members obtained it from the source. See Nov. 13 Tr. at 3088:16-3089:13 (Steffen)("Certainly the simplest explanation is that people just came in and got [Cerro del Medio obsidian]."); Steffen Report at 6.

101. Jemez Pueblo has never controlled the Cerro del Medio obsidian source. See, e.g., Nov. 13 Tr. at 3089:14-3092:17 (Marinelli, Steffen)(discussing Cerro del Medio obsidian distribution and the unlikelihood that any one Tribe could control the source); Map of Valles Rhyolite Obsidian (dated Oct. 1, 2018), admitted November 13, 2018, at trial as United States' Ex. DX-SF.

102. Jemez Mountains obsidian's distribution increases spatially over time, which establishes that other American Indian peoples -- including non-Jemez Pueblos and non-Pueblo

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"Debitage is all the material produced during the process of lithic reduction and the production of chipped stone tools." Debitage, Wikipedia, https://en.wikipedia.org/wiki/Debitage (last visited May 14, 2019). XRF refers to "the emission of characteristic 'secondary' (or fluorescent) X-rays from a material that has been excited by being bombarded with high-energy X-rays or gamma rays. The phenomenon is widely used for elemental analysis and chemical analysis, . . . and for research in geochemistry, forensic science, archaeology and art objects." X-ray fluorescence, Wikipedia, https://en.wikipedia.org/wiki/X-ray_fluorescence (last visited May 14, 2019).

Jemez Pueblo asks the Court to find that Liebmann conducted the study "[p]rior to this litigation." Jemez Pueblo's Proposed Findings ¶ 302, at 106. The evidence offered to support this assertion, however, does not support the proposed fact. Although Liebmann began his research for this project in 2009, see Oct. 30 Tr. at 475:25 (Liebmann), he did not publish his findings until 2017, see Oct. 30 Tr. at 477:3-4 (Liebmann), because "the analysis of all the data . . . took quite a long time," Oct. 30 Tr. at 477:7-8 (Liebmnann). The Court, therefore, will not adopt the proposed fact.

Tribes -- broadly used Jemez Mountains obsidian in at least twelve United States states. See Nov. 13 Tr. at 3094:8-3095:14 (Marinelli, Steffen)(stating that Jemez Mountains obsidian-artifact distribution increases over time); Nov. 29 Tr. at 4551:9-4554:22 (Marinelli, Anschuetz)(discussing Tewa peoples' cultural connection to and use of Cerro del Medio obsidian before migrating to the Jemez Mountains region); Steffen Report at 10-11; Anschuetz Report at 43-46 (discussing Jemez Mountains obsidian's widespread geographical dispersion across hundreds of miles covering nine states).

103. Tewa populations in the Mesa Verde on the Jemez Mountains east flank had direct contact with Tewa peoples living within the Jemez Mountains.[50] See, e.g., Anschuetz Report at 44 (describing the Mesa Verde and Tewa Basin populations' Cerro del Medio obsidian use); Ana Steffen Rebuttal Report of Liebmann Report at 11-12 (dated May 21, 2018), admitted October 29, 2018, as United States' Ex. DX-RZ ("Steffen Rebuttal Report")(describing studies which indicate significant Cerro del Medio obsidian use by multiple non-ancestral Jemez populations throughout the northern Rio Grande region).

104. Valles Rhyolite obsidian[51] is a powerful and enduring cultural symbol among the Pueblos that use it. See, e.g., Anschuetz Report at 44; Steffen Rebuttal Report at 11-12.

[50]Archeological and ethnographic analysis of chipped-stone tools manufactured with Cerro del Medio obsidian, or Valles Rhyolite, supports this fact. See, e.g., Anschuetz Report at 44; Ana Steffen Rebuttal Report of Liebmann Report at 11-12 (dated May 21, 2018), admitted October 29, 2018, as United States' Ex. DX-RZ ("Steffen Rebuttal Report").

[51]Archeologists associate Valles Rhyolite obsidian exclusively with the Valles Caldera. See, e.g., Anschuetz Report at 44; Steffen Rebuttal Report at 11-12.

105. From the 1200s to the late 1800s C.E., Tewa, Keres, and Jicarilla people traveled to the Valles Caldera from numerous sites surrounding the Valles Caldera to collect obsidian. See, e.g., Oct. 31 Tr. at 617:2- 619:9 (Marinelli, Liebmann)(declining to dispute that Jicarilla Apache people used Cerro del Medio obsidian into the twentieth century); Trial Transcript at 3313:15-3314:13 (taken Nov. 14, 2018), filed February 2, 2019 (Doc. 355)("Nov. 14 Tr.")(Marinelli, Steffen)(discussing various Pueblos' Cerro del Medio obsidian use percentages).

106. The Cerro Colorado, San Marcos, Gran Quivira, Pueblo Blanco, and Pueblo Colorado villages nearly 100 miles from the Valles Caldera obtained substantial amounts of Cerro del Medio obsidian from non-Jemez sources. See, e.g., Oct. 30 Tr. at 539:3-540:4 (Marinelli, Liebmann)(acknowledging that Steven Shackley, Professor of Anthropology at the University of California, Berkeley, stated in American Antiquity that "[t]he abundance of Cerro del Medio obsidian at ancestral pueblos in northern New Mexico and beyond, attest to the extent of ties that existed between many of the regional pueblo villages and the Valles Caldera"); Trial Transcript at 3188:10-22 (taken Nov. 14, 2018), filed February 2, 2019 (Doc. 355)("Nov. 14 Tr.")(Marinelli, Steffen)(stating that the non-Jemez ancestral people who occupied the Bandelier and Los Alamos archeological sites used Cerro del Medio obsidian); id. at 3159:18-3164:15 (discussing Cerro del Medio obsidian at the San Marcos village site, and stating that archeologists generally consider that ancestral Cochiti and Santo Domingo Pueblos obtained their obsidian directly from the Valles Caldera); id. at 3189:3-3191:3 (Marinelli, Steffen)(noting that several ancestral Pueblos contemporaneous with Jemez Pueblo, including San Marcos, Gran Quivira, Pueblo Blanco, and Pueblo Colorado, used Cerro del Medio obsidian, and that no evidence suggests a trade connection between these Pueblos and Jemez Pueblo); id. at 3309:12-3310:8 (West, Steffen)(stating that San

Marcos Pueblo traded primarily with Tewa and Keres peoples); id. at 3175:21-3186:22 (Marinelli, Steffen)(noting Gran Quivira, Pueblo Blanco, and Pueblo Colorado's Cerro del Medio obsidian use); id. at 3189:3-3191:3 (Marinelli, Steffen)(stating that Cerro del Medio obsidian that Gran Quivira, Pueblo Blanco, and Pueblo Colorado used did not come from Jemez Pueblo); Trial Transcript at 5587:16-5588:11 (taken Dec. 13, 2018), filed February 19, 2019 (Doc. 366)("Dec. 13 Tr.")(Marinelli, Liebmann)(affirming that the ancestral Zia and Santa Ana village of Cerro Colorado had a higher percentage of Cerro del Medio obsidian than comparable Jemez sites which Liebmann considered); Steffen Rebuttal Report at 11 (describing studies which indicate that San Marcos, Gran Quivira, Pueblo Blanco, and Pueblo Colorado used Cerro del Medio obsidian in significant amounts); Matthew Liebmann, Robert Preucel, and Joseph Aguilar, The Pueblo World Transformed: Alliances, Animosities, and Factionalism in the Northern Rio Grande, 1680-1700 at 148, in New Mexico and the Pimeria Alta; The Colonial Period in the American Southwest (John G. Douglas and William M. Graves eds., 2017)(pages 143-56 admitted December 13, 2013, at trial as United States' Ex. DX-QJ)("The Pueblo World Transformed")(quantifying Cerro Colorado's population's Cerro del Medio obsidian use).

107. The obsidian flakes found at thirty-one Jemez villages came from several different obsidian quarries or sources, including Valles Rhyolite from the Cerro del Medio quarry. See, e.g., Oct. 30 Tr. at 471:15-472:14 (West, Liebmann); Landscapes of Signification at 651.

108. The Cerro del Medio obsidian from thirty-one Jemez villages was "uniquely" "the only source site that appeared at every single one of those 31 pueblos." Oct. 30 Tr. at 471:15-472:14 (West, Liebmann). See Landscapes of Signification at 651.

109. Jemez people made frequent trips into the Valles Caldera between 1300 and 1700 C.E., and ancestral Jemez Pueblo members quarried most of their obsidian from Cerro del Medio. See, e.g., Oct. 30 Tr. at 471:25-472:6 (Liebmann); Landscapes of Signification at 651.

110. Tribes others than Jemez Pueblo, including Santa Clara Pueblo, Cochiti Pueblo, and Navajo peoples, historically used the Valles Caldera for activities such as gathering natural resources and visiting sacred springs. See, e.g., Trial Transcript at 1368:16-24 (taken Nov. 5, 2018), filed January 11, 2019 (Doc. 342)("Nov. 5 Tr.")(Leonard, Whatley)(finding it "obvious" that Pueblos other than Jemez Pueblo used the Valles Caldera); id. at 1370:11-21 (Leonard, Whatley)(discussing Navajo activity in the Valles Caldera); id. at 1377:10-1378:23 (Leonard, Whatley)(acknowledging that Tribes other than Jemez Pueblo used the Valles Caldera to gather obsidian and for religious purposes); id. at 1379:23-25 (Whatley)("[A]reas coming all the way up to the rim of the Caldera were used by Cochiti, that was no question there.").

111. Ancestral Pueblos' widespread Jemez Mountains occupation suggests that no community exercised control over lands in and around the Valles Caldera.[52] See, e.g., Anschuetz Report at 42-43; Nov. 29 Tr. at 4550:3-5 (Anschuetz)("The tree-ring records show that the breadth of pueblo population in use of the Jemez Mountains is great, and its reach is vast.").

112. Pueblo peoples on the Jemez Mountains' northeast, east, southeast, and south-central flanks had access to the Jemez Mountains, including the Valles Caldera, throughout

[52]Tree-ring fire scars, which result from deliberate, localized burns for forest and agricultural maintenance purposes, support this fact. See, e.g., Anschuetz Report at 42-43; Nov. 29 Tr. at 4550:3-5 (Anschuetz).

prehispanic Pueblo history. See, e.g., Nov. 29 Tr. at 4555:17-4556:19 (Marinelli, Anschuetz); Anschuetz Report at 45-46.

113. Individuals associated with numerous non-Jemez communities, including Ohkay Owingeh, Taos, Zia, Pojoaque, Sandia, and Nambe, used the Valles Caldera between the 1890s and the 1980s.[53] See, e.g, Nov. 13 Tr. at 3113:22-3115:19 (Steffen, Marinelli)(noting that, of the twenty-eight Valles Caldera carvings with potential American Indian community association, six state "San Juan," three state "San Juan Pueblo," ten state "Jemez," four state "Taos," two state "Pojoaque," and each state "Nambe," "Sandia," and "Zia," respectively); Steffen Report at 13-20 (discussing Aspen dendroglyphs[54] as an indication that people from diverse communities used the Valles Caldera during the early- to mid-twentieth century).

114. The ten known instances where individuals carved "Jemez" into Valles Caldera aspens do not all relate to Jemez Pueblo,[55] as "Jemez" could indicate "Jemez Springs," "Jemez Mountains," or "Jemez River" place names. E.g. Nov. 13 Tr. at 3114:12-3115:12 (Marinelli,

[53]Carvings on Valles Caldera aspens support this fact. See, e.g., Nov. 13 Tr. at 3113:22-3115:19 (Steffen, Marinelli); Steffen Report at 13-20.

[54]"Arborglyphs, dendroglyphs, silvaglyphs or modified cultural trees is the carving of shapes and symbols into the bark of living trees." Arborglyph, Wikipedia, https://en.wikipedia.org/wiki/Arborglyph (last visited May 8, 2019).

[55]The United States asks the Court to find that "[e]ach of nine instances in which 'Jemez' was carved likely do not relate to Plaintiff . . . ." United States' Proposed Findings ¶ 37, at 13-14 (citing Nov. 13 Tr. at 3115:5-9 (Steffen)). In the cited evidence, however, Steffen affirms merely that the carvings in question are "inclusive of any potential reference to Jemez, whether it be Jemez Springs, Jemez Mountains, Jemez River, Jemez Pueblo." Nov. 13 Tr. at 3115:5-9 (Steffen). The Court, therefore, will not adopt this proposed fact. Additionally, the Court notes that the United States misstates the number of known instances, as Steffen identified ten carvings that state the word "Jemez." Nov. 13 Tr. at 3113:22-3115:19 (Steffen)("We found . . . 10 with Jemez.").

Steffen)(noting that "Jemez" could refer to Jemez Pueblo and various Jemez place names throughout the Jemez Mountains region). See Steffen Report at 16-20.

115. Hispanic sheepherders carved surnames into Valles Caldera aspens during their Valles Caldera occupancy. See, e.g., Nov. 13 Tr. at 3118:2-4 (Steffen)("[I]n general, aspen carvings are usually assumed to be Hispanic sheep herders"); Steffen Report at 17.

C. Multiple Pueblos and Tribes Conceive Their Ancestral Territory as Encompassing Sizable Valles Caldera Segments.

116. Jemez Pueblo elders historically considered the Valles Caldera as a sacred domain over which no single Pueblo or Tribe was the sole proprietor, because ownership was cooperative rather than exclusive. See, e.g., Trial Transcript at 1108:6-11 (taken Nov. 1, 2018), filed January 11, 2019 (Doc. 340)("Nov. 1 Tr.")(Leonard, Weslowski)(affirming that the Pueblos "understand[] lands as a commons, rather than owned by one group or one person"); id. at 1112:11-16 (Leonard, Weslowski).

117. Pueblo peoples have had a mutual responsibility to use the land's natural resources in a spiritually "correct" manner; and through this correct stewardship, many different people have cooperatively used the same region without competitive conflict. See, e.g., Nov. 1 Tr. at 1108:6-11 (Weslowski); id. at 1112:11-16 (Weslowski); Lois Vermilya Weslowski,[56] Native American

[56]The University of New Mexico's Office of Contract Archaeology hired Lois Weslowski to conduct an ethnographic study investigating cultural resources located in the Valles Caldera's Redondo Creek area. See, e.g. Nov. 1 Tr. at 1029:18-20 (Weslowski). In 1979, Weslowski conducted an ethnographic analysis of Jemez Pueblo's use of the geothermal project area based on interviews with Jemez elders; however, because of resource limitations, she conducted research only at Jemez Pueblo despite designing her study to provide an American Indian land use model throughout the Valles Caldera geothermal project area. See, e.g., Nov. 1 Tr. at 1091:8-1092:1 (Leonard, Weslowski); id. at 1084:16-19 (Weslowski); Native American Land Use Along Redondo Creek at v, 105, 123, in High Altitude Adaptations Along Redondo Creek the Baca

Land Use Along Redondo Creek at 117-20, in High Altitude Adaptations Along Redondo Creek the Baca Geothermal Anthropological Project (Craig Baker and Joseph C. Winter eds., 1981)(pages 1-24, 105-95 admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 028)("High Altitude Adaptations").

118. The Jemez Pueblo Ancestral Land Project aimed to identify the lands that Jemez Pueblo occupied at the point of Spanish contact in 1541 C.E., when Jemez Pueblo's population was at its highest point.[57] See, e.g., Nov. 4 Tr. at 358:25-359:17 (Luebben, Whatley).

Geothermal Anthropological Project (Craig Baker and Joseph C. Winter eds., 1981)(pages 1-24, 105-95 admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 028)("High Altitude Adaptations").

Weslowski wrote that "Towa oral history describes the boundaries of . . . the aboriginal domain of their ancestors. . . . This domain is traditionally recognized as a joint use area for the three pueblos of Zia, Santa Ana, and Jemez which have cooperatively utilized the region since prehistoric times." High Altitude Adaptations at 108. Weslowski states that many Pueblos and Navajo communities still use the Redondo Creek area for traditional purposes, that the area is "still considered a valuable location by all these tribes," and that "the cultural value of the project area is inextricable from the current native use of the region." High Altitude Adaptations at 125. Weslowski notes also that her Jemez Pueblo "consultants consistently named Santa Clara, Tesuque, Pojoaque, San Juan, Cochiti, and San Ildefonso as using the project area for ritual purposes." High Altitude Adaptations at 125. Weslowski mapped the "joint use area" as including most of the Valles Caldera, but excluded its eastern and northern portions. High Altitude Adaptations at 108.

[57]Jemez Pueblo Tribal archeologist William Whatley, whom Jemez Pueblo hired in 1991, directed the Ancestral Land Project's mapping activities and conducted Valles Caldera site visits and hundreds of interviews with Jemez elders and knowledgeable traditional leaders about locations significant to Jemez Pueblo. See, e.g., Nov. 4 Tr. at 1192:11-13 (Luebben, Whatley); id. at 1206:6-11 (Luebben, Whatley).

Whatley is a field archaeologist with experience mapping terrain and archeological sites using GPS systems. See Nov. 4 Tr. at 1139:13-1140:11 (Luebben, Whatley); id. at 1148:14-1149:17 (Luebben, Whatley); id. at 1150:5-9 (Whatley); id. at 1150:24-1151:24 (Luebben, Whatley). Whatley is a non-Indian Jemez Pueblo member and a confidante to many Jemez Pueblo elders and important religious leaders, see id. at 1186:2-25 (Luebben, Whatley); id. at 1188:1-1189:25 (Luebben, Whatley); id. at 1190:1-7 (Whatley), and few non-Jemez individuals are as close to the Jemez community as Whatley, see id. at 1173:11-1180:17 (Luebben, Whatley); id. at

119. Jemez Pueblo elders did not agree on the significance of every location that the Ancestral Land Project considered. See, e.g., Nov. 4 Tr. at 1232:12-1233:12 (Whatley)("So there was a lot of discussion, a lot of points were erased and moved by other people."), id. at 1360:19-22 (Leonard, Whatley); Designation of Deposition Testimony -- Gregory Kauffman at 62:15-25 (Kauffman), admitted November 20, 2018, at trial as United States' Ex. DX-JX 9 (asserting that, when creating maps of places sacred to Jemez Pueblo people, "the most learned elders, the people who had the best chance of remembering place names and the ceremonies there, . . . could not agree").

120. The Supreme Council of Religious Leaders created a map identifying Jemez Pueblo's land-use and occupancy boundaries at the height of its population in 1541 C.E. and identified a "habitation zone" where Jemez Pueblo people lived and actively defended the land.[58] Nov. 4 Tr. at 1236:19-1237:10 (Luebben, Whatley); id. at 1300:5-23 (Luebben, Whatley).

1186:20-1188:13 (Luebben, Whatley).

Whatley visited the Valles Caldera from the 1980s to the late 1990s with many Jemez Pueblo members, including Frank Gachupin, Cristobal Loretto, Barnabus Romero, Stewart Gachupin, Rosendo Gachupin, Pete Toya, Pablo Gachupin, representatives from several Jemez Caciques and other society members. See Nov. 4 Tr. at 1168:15-25 (Whatley); id. at 1169:17-1170:4 (Luebben, Whatley); id. at 1171:-1172:-5 (Luebben, Whatley); id. at 1372:9-18 (Whatley). [redacted] See id. at 1221:12-1222:24 (Luebben, Whatley); id. at 1227:3-19 (Luebben, Whatley).

[58]The Supreme Council wanted the map for educational purposes, to teach Jemez youth and forest rangers about Jemez Pueblo's areas of concern, although Jemez Governors and Tribal Council also used the map in secular negotiations with state, private, and federal agencies. See Nov. 4 Tr. at 1206:2-1207:18 (Luebben, Whatley); id. at 1252:13-21 (Luebben, Whatley); id. at 1281:13-1282:8 (Luebben, Whatley). Whatley worked with between forty and sixty Jemez elders and traditional leaders, and with at least eight Jemez societies. See Nov. 4 Tr. at 1231:15-20 (Whatley); id. at 1244:1-8 (Whatley). To research the data for his maps, Whatley had at least twenty "table-mapping" and thirty "in-field mapping" sessions with Jemez Pueblo elders and

121. Whatley's Jemez Pueblo ancestral domain maps do not categorize the Valles Caldera as exclusive to Jemez Pueblo and instead identify portions of the Valles Caldera sections that were jointly used with Keres, Tewa, and Ute people and further sections that Jemez Pueblo recognized as a Keres or Tewa Pueblo's exclusive domain. See Nov. 4 Tr. at 1374:8-15 (Leonard, Whatley)(affirming that the Whatley's 1995 Ancestral Jemez Domain map's eastern boundary shows Tewa, Keres, and Ute joint-use areas); Plat of the Ancestral Jemez Domain at 1 (dated Jan. 1, 1995), admitted October 29, 2018, at trial as United States' Ex. DX-GW; VCNP Map at 1 (dated Oct. 1, 2015), admitted November 2, 2018, at trial as United States' Ex. DX-OY; Map of Whatley GIS Data at 1 (undated), admitted November 2, 2018, at trial as United States' Ex. DX-SL.

122. Jemez Pueblo's 1995 "Ancestral Jemez Domain" map identifies a large Valles Caldera section as a "joint use area" shared with "peoples of the Tewa and Keresan Nations," and places Jemez Pueblo's ancestral domain boundary within five miles of Redondo Peak, thereby excluding a sizable Valles Caldera section from Jemez Pueblo's ancestral domain. Plat of the Ancestral Jemez Domain at 1.

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traditional leaders wherein Jemez Pueblo elders would first tell Whatley where on a topographic map to mark Jemez Pueblo use locations and then accompany Whatley to access the particular areas marked so that Whatley could plot the location using a compass and triangulation. See Nov. 4 Tr. at 1233:1-1235:4 (Luebben, Whatley); id. at 1239:14-1240:13 (Luebben, Whatley); id. at 1240:21-1242:20 (Luebben, Whatley). Whatley would enter the information into his database, see Nov. 4 Tr. at 1248:6-24 (Whatley), which currently represents GPS information that Whatley collected through 2001, before he ceased working for Jemez Pueblo, see Nov. 4 Tr. at 1151:25-1152:6 (Luebben, Whatley). Whatley labelled sites as "Ancestral Puebloan" until he was able to visit each site and confirm whether the site was, to the best of his knowledge, ancestral Jemez. See Nov. 4 Tr. at 1333:3-5 (Whatley); id. at 1256:19-1257:1 (Luebben, Whatley). Whatley was the only person who maintained his database, the files of which are not in English. See Nov. 4 Tr. at 1248:6-24 (Luebben, Whatley); id. at 1253:10-22 (Whatley); id. at 1254:5-1255:3 (Luebben, Whatley).

123. The March 2000 Valles Caldera map that Jemez Pueblo created for a presentation to the United States Congress places significant parts of the Valles Caldera's northern and eastern portions outside Jemez Pueblo's "Land Occupied by the Jemez Nation at Spanish Contact in AD 1540," because the Spanish removed Jemez Pueblo from that land. See, e.g., Baca Location No. 1 and the Proposed Establishment of the VCP: An Overview of the Concerns and Recommendations of the Pueblo of Jemez at 5 (dated March 2000), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 13; Designation of Deposition Testimony -- Allen Gachupin at 29:8-30:24 (Gachupin), admitted November 20, 2018, at trial as United States' Ex. DX-JX 2 (discussing changes in Jemez Pueblo's domain over time, specifically from a larger area before the Spanish arrived in 1541 to a smaller area thereafter).

124. Jemez Pueblo used a geographic information system ("GIS")[59] to map a Jemez Pueblo "exclusive use" area that not only identifies non-Jemez sites' locations within the Valles Caldera but also places the majority of the Valles Caldera outside the Jemez Pueblo "Exclusive Use Area AD 1541." Map of Whatley GIS Data at 1 (undated), admitted November 2, 2018, at trial as United States' Ex. DX-SL.

125. Jemez Pueblo's GIS map and a litigation map on which Jemez Pueblo marked a Jemez exclusive use area, a Cochiti area, and a Santa Clara area within the Valles Caldera,

[59]"GIS is a system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data. GIS applications are tools that allow users to create interactive queries (user-created searches), analyze spatial information, edit data in maps, and present the results of all these operations." Geographic information system, Wikipedia, https://en.wikipedia.org/wiki/Geographic_information_system (last visited May 16, 2019).

corroborate each other; both maps identify a portion of the Valles Caldera's southwest quadrant as exclusive to Jemez Pueblo. Compare VCNP Map at 1 with Map of Whatley GIS Data at 1.

126. A 1986 map depicts Jemez Province as extending only slightly into the Valles Caldera.[60] See Oct. 30 Tr. at 561:22-562:7 (Marinelli, Liebmann); Michael Elliott,[61] Overview and Synthesis of the Archeology of the Jemez Province, New Mexico at 2 (dated 1986), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 122 ("Archeology of the Jemez Province").

127. Jemez Pueblo has not maintained consistently that the entire Valles Caldera belongs exclusively to Jemez Pueblo.[62] See Kehoe Rebuttal Report at 10 ("Significantly, the assertions of exclusive Jemez Indian ownership of the Valles Caldera in these recent depositions contradicts the public positions taken in earlier periods by some Jemez Indians, who described sharing these lands

[60]The United States asks the Court to find that Jemez Pueblo had a "pre-litigation concept that its aboriginal domain did not include the vast majority of the Preserve." United States' Proposed Findings ¶ 476, at 134. The cited evidence; however, does not support this proposed fact. See Overview and Synthesis of the Archeology of the Jemez Province, New Mexico at 1 (dated 1986), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 122 ("[T]he boundaries of the Jémez Province have been arbitrarily defined by the distribution of architectural/habitation sites exhibiting high frequencies of Jemez . . . ceramics. This area does not include certain sustaining areas that were undoubtedly utilized by the protohistoric Jémez people. Traditional boundaries of the Jémez Province . . . include a much larger area."). The Court, therefore, will not adopt the proposed fact.

[61]Mike Elliot, whom Liebmann recognizes as a Jemez Pueblo archeology expert, created the 1986 map. See Oct. 30 Tr. at 561:22-562:7 (Marinelli, Liebmann).

[62]The United States asks the Court to find that Jemez Pueblo's "pre-2000 admissions establishing that many tribes used the preserve as a commons are far more credible than its post-2000 representations that the Preserve lands were exclusively Jemez." United States' Proposed Findings ¶ 477, at 135. The record does not support the proposed fact, because Jemez Pueblo does not deny that other Tribes use and have used the Valles Caldera, but instead insists that such use is and always has been permissive. See, e.g., Jemez Pueblo's Proposed Findings ¶¶ 545-96, at 163-85. The Court, therefore, will not adopt the proposed fact.

equally with other pueblos."); id. at 11 ("Former Jemez Governor Toya repeatedly referred to the joint use of shrines and other areas with Baca Location 1 by the Pueblos of Jemez, Santa Ana, and Zia.").

128. Jemez Pueblo never asserted to the Dunigan family that it owned the Valles Caldera. See Designation of Deposition Testimony -- Andrew Patrick Dunigan at 26:12-21 (Dunigan), admitted November 20, 2018, at trial as United States' Ex. DX-JX 8.

129. Jemez Pueblo's Ancestral Land Project map,[63] compiled using its best-available GIS data, shows that the portion of the Valles Caldera which Jemez Pueblo considers its "Exclusive Use Area, circa AD 1541" occupies a relatively small portion of the Valles Caldera's southwest corner.[64] See Nov. 4 Tr. at 1252:22-1253:5 (Luebben, Whatley), 1260:20-1261:1 (Luebben,

[63]At trial, the United States objected to moving into evidence Plaintiff's Demonstratives Notebook, labeled "PX 582," which includes Whatley's map, labeled "PX_Dem_20," because, according to the United States, Jemez Pueblo did not fully address some of the demonstratives' confidentiality concerns, and the Court stated its inclination to consider PX 582, and then give both parties an opportunity to submit a redacted copy of the Court's Findings of Fact and Conclusions of Law. See Dec. 13 Tr. at 5629:12-5638:8 (Solimon, Court, Marinelli). The Court has considered the United States' objection and admits PX_Dem_20 for the limited purpose of evidencing Jemez Pueblo's present-day belief in its territorial boundaries as of 1541 C.E. The Court does not find that the map reflects Jemez Pueblo's actual boundaries in 1541 C.E.

[64]Whatley helped produce PX_Dem_20 and provided the cartographer with instructions on how to use his database. See Nov. 4 Tr. at 1253:1-5 (Whatley); id. at 1260:20-1261:1 (Luebben, Whatley). At trial, Whatley placed markings on PX_Dem_21, which is a modified version of PX_Dem_20 that includes illustrations of ancestral Jemez Villages and sites that Whatley visited. See Nov. 4 Tr. at 1319:6-14 (Whatley). Whatley visited 100 percent of the sites in the area that he labeled "1," visited ninety percent of the sites in the area that he labeled "2," and observed artifacts and lithic scatters in the area that he labeled "3." See Nov. 4 Tr. at 1319:23-1320:14 (Whatley). Jemez Pueblo elders and archeologists associated with the Ancestral Land Project visited and confirmed the remaining forty percent of the sites in area 2. See Nov. 4 Tr. at 1320:9-14 (Whatley); id. at 1339:3-10 (Whatley); id. at 1321:10-1322:3 (Whatley). In total, Whatley spent seventeen years walking the boundaries identified in PX_Dem_20 and PX_Dem_21, see Nov. 4 Tr. at 1364:21-24 (Whatley), and these are the last maps that Whatley helped to produce, see Nov.

Whatley); Plaintiff's Demonstratives Notebook, PX_Dem_20 (undated)(moved December 13, 2018, at trial, admitted May 15, 2019, as Jemez Pueblo's Ex. 582).

130. Jemez Pueblo did not consult with other Pueblos for its work on the Jemez Pueblo Ancestral Land Project, and its maps, therefore, do not depict other Tribes' understanding of Jemez Pueblo's ancestral boundaries. See Nov. 4 Tr. at 1368:3-15 (Leonard, Whatley).

131. Two maps that Jemez Pueblo prepared limit Jemez Pueblos' territory even more than other Jemez Pueblo-produced maps, and evince inconsistencies in Jemez Pueblo's efforts to map its territory; these maps include only Banco Bonito and thereby exclude most of the Valles

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4 Tr. at 1418:10-18 (Whatley). Whatley obtained all data for the Ancestral Land Project from Jemez Pueblos' past and active land-use representations. See Nov. 4 Tr. at 1366:19-22 (Whatley). [redacted] See Nov. 4 Tr. at 1259:9-18 (Whatley); id. at 1278:11-19 (Whatley); id. at 1270:14-24 (Luebben, Whatley). [redacted] see Nov. 4 Tr. at 1359:18-24 (Whatley), [redacted] see Nov. 4 Tr. at 1299:6-16 (Whatley); id. 1302:20-1303:7 (Luebben, Whatley); id. at 1304:1-4 (Whatley). [redacted] . See Nov. 4 Tr. at 1304:1-8 (Whatley). [redacted] See Nov. 4 Tr. at 1310:9-15 (Luebben, Whatley). [redacted] See, e.g., Nov. 4 Tr. at 1310:9-21 (Whatley); Nov. 6 Tr. at 1874-1875:5-16 (Ferguson); Trial Transcript at 4374-4375:15-1 (taken Nov. 20, 2018), filed February 12, 2019 (Doc. 360)(Gachupin); High Altitude Adaptations at 117. [redacted] See Nov. 4 Tr. 1310:22-1311:4 (Luebben, Whatley). [redacted] See Nov. 4 Tr. at 1311:19-25 (Whatley).

Jemez Pueblo asks the Court to find that [redacted] This record does not support the proposed fact, because, although they represent similar boundaries, the two maps do not represent the same boundaries. [redacted] The Court, therefore, will not adopt the proposed fact.

Caldera from "Jemez Province." E.g., Barry Price Steinbrecher and Paul Tosa, The Hemish Footprint: Ethnoarchaeological Perspectives on Movement and Connectivity in the Landscape Powerpoint at 2, 8 (undated), admitted October 30, 2018, at trial as United States' Ex. DX-SM ("The Hemish Footprint"). See, e.g., Oct. 30 Tr. at 309:17-311:4 (Dykema, Tosa), id. at 315:21-316:3 (Dykema, Tosa)(identifying Tosa, Ferguson, and Steinbrecher as the individuals that prepared the two maps); id. at 312:12-23 (Dykema, Tosa)(describing the Jemez "province," or "footprint" depicted in The Hemish Footprint on pages two and eight).

132. Jemez Pueblo's map entitled "Hemish ancestral territory after A.D. 1250" includes lands that Santa Clara, Cochiti, Zia, and Santa Ana Pueblos owned and occupied.[65] E.g., Nov. 6 Tr. at 1898:21-1900:14 (Marinelli, Ferguson)(affirming that Ferguson's Jemez ancestral territory map includes lands that Santa Clara, Zia, and Cochiti Pueblos currently own). See, e.g., Nov. 30 Tr. at 4745:14-4746:24 (Marinelli, Anschuetz)(asserting the Ferguson's Jemez ancestral territory map overlaps with other Pueblo's archeological districts); Anschuetz Report at 15 (mapping Pueblos affiliated with the Jemez Mountains). Compare Ferguson Report at 62 (mapping ancestral territory that encompasses and extends approximately eighteen miles north of the Valles Caldera)

[65]The United States asks the Court to find that other Pueblos' presence on Ferguson's map "is evidence that Jemez could not have conceived of its 'ancestral territory' as exclusive to Jemez." United States' Proposed Findings ¶ 482, at 138. The record does not support the proposed fact, however, as other Pueblos' presence on Jemez territory does not necessarily affect Jemez Pueblo's conception of its territorial boundaries, and because Jemez Pueblo's position is that it permitted other Tribes to use the Valles Caldera according to Tribal custom. See, e.g., Nov. 9 Tr. at 2731-2732:25-23 (West, Suina); Deposition Testimony of Gilbert Suazo at 16:14-17:10 (Suazo), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 559. The Court, therefore, with not adopt the proposed fact.

with Anschuetz Rebuttal Report at 39 (mapping multiple Pueblos locations within Ferguson's Jemez ancestral territory map).

133. The Jemez ancestral territory map's references to Jemez Pueblo's ancestral lands as its ancestral "domain" does not equate to "control" over those lands.[66] Nov. 6 Tr. at 1900:15-1901:1 (Marinelli, Ferguson).[67]

134. Jemez Pueblo recognized in 2000, before the United States acquired the Valles Caldera, that other Tribes use the Valles Caldera, including Redondo Peak. See William Whatley, The Pueblo's Revised Senate Bill 2621 (Inclusion of Jemez NRA Language) in The Pueblo of Jemez Position Points & Management Recommendations, at 24 (dated Jan. 1, 1998), admitted October 29, 2018, at trial as United States' Ex. DX-HB-24 (proposing modifications to the Valles Caldera acquisition legislation to "protect and preserve archaeological and cultural sites that have

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[66]The United States asks the Court to find that Ferguson recognized that Jemez Pueblo "did not control the entire area that it considers its aboriginal domain." United States' Proposed Findings ¶ 483, at 138 (citing Nov. 6 Tr. at 1900:15-1901:1). The trial transcript, however, does not support this finding. See Nov. 6 Tr. at 1900:15-1901:1 (Marinelli, Ferguson)(affirming merely that equating "domain" and "control" "is difficult"). The Court, therefore, will not adopt the proposed fact.

[67]The United States asks the Court to find that Jemez Pueblo's

> concept of its aboriginal territory, as told to Dr. Ferguson within the past few years, is either: 1) so broad as to have no value in determining whether Plaintiff was ever the exclusive aboriginal user of any territory; 2) so myopically focused on Plaintiff, to the exclusion of other tribes, that it has no evidentiary value; or 3) so manifestly at odds with Plaintiff's pre-litigation concept of its territory that it has no evidentiary value.

United States' Proposed Findings ¶ 487, at 139. The Court concludes that, although Ferguson's map is broad, it nevertheless has evidentiary value in that it represents accurately Jemez Pueblo's belief in its ancestral land's boundaries for resource collection and shared, i.e., not exclusive, use with other Pueblos. The Court, therefore, will not adopt the proposed fact.

historical, religious and traditional significance to the Pueblo of Jemez and other Native Americans"); Designation of Deposition Testimony -- Eusebio Toya at 36:24-37:17 (E. Toya), admitted November 20, 2018, at trial as United States' Ex. DX-JX-11.

135. Jemez Pueblo has repeatedly recognized that its real property interests in the Valles Caldera are not absolute.[68] See Pueblo of Jemez Strategic Plan 2000 (dated Aug. 1, 2001), admitted November 20, 2018, at trial as United States' Ex. DX-IQ (depicting the "Jemez Province" as excluding all but the VNCP's southwest corner, i.e., the Banco Bonito)); Designation of Deposition Testimony -- Allen Gachupin at 41:12-18 (Gauchupin), admitted November 20, 2018, at trial as United States' Ex. DX-JX-2 (asserting that, in 1999, Jemez Pueblo was "hopeful and wishful that we would make progress toward somehow eventually regaining the Valles Caldera," because "we didn't have it"); Letter from Gov. Gachupin to M. Echaveste, Assistant to the President, at 2-3 (dated March 14, 2000), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 13 (seeking to purchase 200 acres within the Valles Caldera to obtain "direct ownership").

[68]The United States asks the Court to find that Jemez Pueblo "repeatedly recognized that it lost any property interest in the Preserve well before 2000." United States' Proposed Finding ¶ 486, at 138 (citing Pueblo of Jemez Strategic Plan 2000 (dated Aug. 1, 2001), admitted November 20, 2018, at trial as United States' Ex. DX-IQ; Designation of Deposition Testimony -- Allen Gachupin at 41:12-18 (Gauchupin), admitted November 20, 2018, at trial as United States' Ex. DX-JX-2). The cited evidence, however, does not support the proposed fact, because the evidence asserts claims to areas within the Valles Caldera, for example, Banco Bonito, see Pueblo of Jemez Strategic Plan 2000 (depicting the "Jemez Province" as excluding all but the Valles Caldera's southwest corner, i.e., the Banco Bonito), and ambiguous statements which do not evince that Jemez Pueblo abandoned its claims to the Valles Caldera, see, e.g., Designation of Deposition Testimony -- Allen Gachupin at 41:12-18 (Gauchupin)(asserting that, in 1999, Jemez Pueblo was "hopeful and wishful that we would make progress toward somehow eventually regaining the Valles Caldera" because "we didn't have it"). The Court, therefore, will not adopt the proposed fact.

4. The Spanish Constrained Jemez Pueblo's Valles Caldera Use During the Spanish Colonial Period.

136. Spanish explorers first encountered Jemez Pueblo in 1541 C.E. while exploring the Jemez Mountains.[69] See, e.g., Nov. 14 Tr. at 3361:15-25 (Luebben, García y Griego)(discussing Francisco Vázquez de Coronado's expedition from Mexico to present-day Kansas through parts of the southwestern United States between 1540 and 1542); Nov. 4 Tr. at 1263:15-20 (Whatley)(discussing Jemez Pueblo's population in 1541 C.E., i.e., Jemez Pueblo's first contact with the Spanish).

137. Jemez Pueblo was among the last Pueblos that the Spanish encountered when traveling up the Rio Jemez, and Jemez Pueblo remained more geographically and linguistically isolated than other Pueblos during the Spanish colonial period.[70] See, e.g., Nov. 15 Tr at 3551:6-16 (García y Griego); Pueblo of Jemez Expert Witness Report by Dr. Manuel García y Griego[71] at

[69]A Spanish practice involved naming mountain ranges, rivers, and geographic areas after the people who lived in those areas, see Nov. 14 Tr. at 3361:15-25 (Luebben, García y Griego), and the Spanish named the Jemez Mountains after the Jemez people because they recognized Jemez Pueblo as mountain people, as distinct from Pueblo people who lived along the rivers, such as the Rio Grande, see Nov. 14 Tr. at 3360:5-3361:25 (Luebben, García y Griego); id. at 3391:12-19 (García y Griego).

[70]Jemez Pueblo asks the Court to conclude that, given Jemez Pueblos' mountain location and isolation relative to other Pueblos, "the Spanish had little knowledge of the Jemez people, the Claim Area, and Jemez's use of the Claim Area." Jemez Pueblo's Proposed Findings ¶ 362, at 121. The record, however, does not support the proposed fact. The Spanish, for example, had knowledge sufficient to find and relocate Jemez Pueblo to Walatowa by 1621 C.E., where they had established a permanent mission. The Court, therefore, finds that, although the Spanish had scant Jemez Pueblo knowledge before 1598 C.E., by 1620 C.E. the Spanish were sufficiently familiar with the Jemez Mountain region to govern its inhabitants. The Court, therefore, will not adopt the proposed fact.

[71]García y Griego researched Jemez Pueblo's Jemez Mountains use, did not study specifically the Valles Caldera's use by other than Jemez Pueblo, and did not review documents related to other Pueblos' or Tribes' Valles Caldera use. See Nov. 14 Tr. at 3355:4-9 (Luebben, García y Griego); id. at 3426:19-25 (Leonard, García y Griego). García y Griego did not find

10-11 , admitted October 29, 2018, at trial as Jemez Pueblo' Ex. PX 189 ("García y Griego Report").

138. The Jemez Plateau occupants that the Spanish explorers encountered in 1581 and 1582 C.E. did not constitute a single Tribe, but shared the same language and occupied at least ten villages in the modern-day Jemez Springs area.[72] See, e.g., Oct. 30 Tr. at 368:9-25 (Liebmann);

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direct evidence that Jemez Pueblo used the Valles Caldera, and his conclusions to that end are based on inference. See, e.g., Nov. 14 Tr. at 3386:6-23 (Luebben, García y Griego); Nov. 15 Tr. at 3497:15-23 (Leonard, García y Griego). A historian, however, can make an educated inference that Jemez Pueblo's Valles Caldera use continued based on past uses and present uses. See Nov. 14 Tr. at 3387:8-22 (García y Griego). The Court, therefore, credits García y Griego's conclusion that Jemez Pueblo continued to use the Jemez Mountains and Valles Caldera during the Spanish colonial period. See, e.g., Nov. 14 Tr. at 3387:5-3388:9 (Luebben, García y Griego); García y Griego Report at 47-48.

García y Griego relied heavily on Craig Martin's research in developing his opinions for the case, and Martin's work relies on an interview with only a single Jemez Pueblo member -- David Yepa. Martin nevertheless recognizes that many Tribes historically used the Valles Caldera and considered it their "traditional lands," which García y Griego did not include in his expert report. Nov. 14 Tr. at 3424:8-11 (García y Griego); Nov. 15 Tr. at 3522:16-25 (García y Griego); Craig Martin, Valle Grande: A History of the Baca Location No. 1, at xii (dated 2003), admitted November 15, 2018, at trial as United States' Ex. DX-JO (acknowledging Yepa's assistance); id. at 12 (describing Zia Pueblo's Valles Caldera origin story); id. at 16 ("The Valles Caldera falls within the traditional lands of many of the pueblos surrounding the Jemez Mountains, including the San Ildefonso, San Juan, Santa Ana, Santa Clara, Santo Domingo, and Tesuque pueblos. . . . Jicarilla Apache people often used the caldera for hunting grounds.").

[72]Jemez Pueblo asks the Court to find that "Jemez is the only Pueblo that had villages in the Jemez Mountains." Jemez Pueblo's Proposed Findings ¶ 365, at 121 (citing Nov. 14 Tr. at 3361:6-14 (García y Griego)). The cited evidence, however, does not support the proposed fact. See Nov. 14 Tr. at 3361:6-14 (García y Griego)("[T]he Jemez people . . . had villages and communities up in the mountains north and east of Walatowa, between what is now current Jemez Pueblo and the Valles Caldera. As far as I know, the other pueblos . . . did not have communities in that area."). The area that García y Griego describes is merely the area between Walatowa and the Valles Caldera; García y Griego does not speak to the entire Jemez Mountains range. The Court, therefore, will not adopt the proposed fact.

id. at 425:16-23 (Liebmann); Nov. 14 Tr. at 3361:18-25 (García y Griego); García y Griego Report at 23.

139. The Spanish began to permanently settle New Mexico in 1598 C.E. See, e.g., Oct. 30 Tr. 366:9-18 (Liebmann); García y Griego Report at 7.

140. Spanish explorers, as early as 1602 C.E., mapped several Pueblos' locations, including the Pueblos of Cochiti, Jemez, Santa Ana, Santa Clara,[73] and Zia, in areas surrounding

[73]Jemez Pueblo asks the Court to find that, "[p]rior to this litigation, the Pueblo of Santa Clara repeatedly indicated that its boundaries do not encompass the Claim Area, but rather only include a small portion of the Valles Caldera that forms the Santa Clara Creek Canyon," based, in part, on Jemez Pueblo's understanding that "Spanish documents indicated that the boundaries of the Pueblo of Santa Clara skirted the Jemez Mountain range and located the western limit of Santa Clara's lands in the foothills," and because "[t]he 1724 Tafoya Grant placed the western boundary of the Pueblo of Santa Clara as La Sierra Alta, which is outside and east of the Claim Area." Jemez Pueblo's Proposed Findings ¶ 601, at 189 (citing Dec. 3 Tr. at 5161:20-25 (Chavarria); id. at 5162-5163:19-25 (Chavarria); id. at 5164:2-5 (Chavarria); History of the Boundary Between the Baca Location No. 1 Grant and Santa Clara Pueblo at 66-67 (dated June 3, 1998), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 172). Although the cited evidence supports Jemez Pueblo's assertion that Santa Clara Pueblo never claimed the entire Valles Caldera as its aboriginal territory, Santa Clara Pueblo believes that the Valles Caldera "has always been a shared use." Dec. 3 Tr. at 5168:23-5169:3 (Chavarria). See also Interview Notes with Porter Swentzell by Kurt F. Anschuetz, Ph.D. at 11 (dated 2011), admitted October 29, 2011, at trial as United States' Ex. DX-MI ("The custom is that nobody owns the Valles exclusively, and that there is respect for others when they are there too. Many communities in the area would go to the Valles and gather resources and pray. Nobody can stake out claims to the exclusion of others."). Moreover, the record indicates that Spanish land grants did not always encompass all lands that a given Tribe believed were its aboriginal territory, compare Oct. 30 Tr. at 584:24-585:14 (Marinelli, Liebmann)(affirming that the Spanish ended Jemez Pueblo's Banco Bonito occupation and removed Jemez Pueblo from the Valles Caldera region); Nov. 7 Tr. at 2168:20-2169:3 (Luebben, Madalena)(asserting that Spain "took ownership of our lands"); García y Griego Report at 15, with Nov. 4 Tr. at 3451:6-13 (Leonard, García y Griego)(affirming that the Spanish surveyor-general recommended that Ysleta Pueblo receive 110,000 acres based on its aboriginal title claim), and that Santa Clara Pueblo sought before this litigation to purchase additional land that it considers its aboriginal territory within the Valles Caldera's northeast quadrant, Dec. 3 Tr. at 5153:5-16 (West, Chavarria)(affirming that Santa Clara Pueblo was able to purchase only 5,045 acres of 9,100 within the Valles Caldera); Pueblo of Santa Clara, Resolution No. 97-18 at 1 (dated Oct. 22, 1997), admitted October 29, 2018, at trial as United States' Ex. DX-GZ. The Court, therefore,

the Valles Caldera. See, e.g., Nov. 14 Tr. at 3378:15-3379:25 (Luebben, García y Griego); García y Griego Report at 23 (depicting a copy and reconstruction of a 1602 map of New Mexico that includes numerous Pueblos' locations).

141. Although between 1598 and 1601 C.E., Spanish missionaries established a small mission at Guisewa, in modern-day Jemez Springs, they were unable to minister effectively to Jemez Pueblo until they built a mission at Walatowa in 1620.[74] See, e.g., Oct. 30 Tr. at 366:19-25 (Liebmann); García y Griego Report at 25.

142. The Spanish, beginning in 1598 and culminating in 1621 C.E., forced Jemez Pueblo from its dispersed mountain communities into modern-day Walatowa.[75] See, e.g., Nov. 14 Tr. at 3378:15-19 (García y Griego); id. at 3380:2-6 (Luebben, García y Griego).

143. The Spanish removed Jemez Pueblo members to Walatowa to consolidate the rebellious Jemez communities. See, e.g., Oct. 30 Tr. at 367-368:1-4 (Liebmann); Nov. 14 Tr. at 3369:3-15 (Luebben, García y Griego); id. at 3380:2-16 (García y Griego).

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will not adopt the proposed fact.

[74]Jemez Pueblo asks the Court to find that the Spanish missionaries could not evangelize to Jemez Pueblo, because Jemez Pueblo's "villages and fieldhouses were so high in the mountains." Jemez Pueblo's Proposed Findings at ¶ 361, at 121 (citing Oct. 30 Tr. at 366:19-25 (West, Liebmann); Liebmann Report at 32). The record, however, does not support the proposed fact. See Liebmann Report at 32 ("[T]he rugged terrain of the Jemez Province frustrated the Franciscan missionaries assigned to minster to the Jemez."). Moreover, Liebmann affirms that the Spanish encountered "quite a few" large Jemez villages, Oct. 30 Tr. at 368:5-16 (West, Liebmann), and the Court finds that Jemez Pueblo's widespread dispersion also accounts for the missionaries frustrated efforts. The Court, therefore, will not adopt the proposed fact.

[75]The process through which the Spanish forcibly removed Pueblo people from their dispersed communities into concentrated towns is known as "reducción." Nov. 14 Tr. at 3378:15-19 (García y Griego).

144. Jemez Pueblo is the only Pueblo that the Spanish forcibly relocated.[76] See, e.g, Nov. 15 Tr. at 3448:11-17 (García y Griego)("So the locations of the pueblos is not determined by the Spanish, except in the specific case of the Jemez, where they were forced to come down from the mountains from approximately disbursed communities, into what today is called Jemez Pueblo, and that the Hemish people referred to as Walatowa."); Oct. 30 Tr. at 367:21-368:4 (Liebmann)("But at Walatowa, the Spaniards seemingly established a new mission in that southern end of the valley, and then drew all the scattered pueblo people in.").

145. Jemez Pueblo members resisted Spanish removal efforts, and returned several times to their ancestral Jemez Mountains villages before and after the Pueblo Revolt. See, e.g., Nov. 14 Tr. at 3380:2-3381:25 (García y Griego); id. at 3448:11-17 (García y Griego).

[76]Jemez Pueblo asks the Court to find that "Spanish colonial policy did not interfere with Jemez Pueblo use of its traditional (aboriginal) lands and protect[ed] pre-existing rights," Jemez Pueblo's Proposed Findings ¶ 366, at 122, and that it "recognized that continuation of Pueblo uses of their traditional aboriginal homelands beyond the confines of their four league grants was necessary for Pueblo survival and was in the interests of Spain," Jemez Pueblo's Proposed Findings ¶ 370, at 123. The record, however, does not support the proposed facts. The Spanish reducción policy, for example, removed virtually all Jemez Pueblo members from their traditional homes and thereby interfered with Jemez Pueblo's traditional land use. See, e.g., Nov. Tr. at 3378:12-19 (Luebben, García y Griego); id. at 3379:6-3380:6 (Luebben, García y Griego). Moreover, compulsory religious indoctrination interfered with Jemez Pueblo's ability to practice its traditional religious rights, see, e.g., Nov. 15 Tr. at 3564:20-21 (García y Griego)("The Spanish did not recognize religion, other than Catholicism."); García y Griego Report at 33-34, which, for example, included religious pilgrimages to Redondo Peak. Further, although Spain had an interest in ensuring the Pueblos' and the Tribes' survival to pay tribute, such interest was limited to agricultural and artisanal -- not religious -- activities. See, e.g., Nov. 14 Tr. at 3401:11-3402:4 (Luebben, García y Griego); García y Griego Report at 30. The Court, therefore, will not adopt the proposed fact.

146. The Valles Caldera was public domain land during the Spanish period.[77] See, e.g., Nov. 14 Tr. at 3458:14-17 (Leonard, García y Griego); Nov. 15 Tr. at 3564:16-25 (García y Griego).

147. Spain made to the Pueblos land grants that consisted of four-square league areas representing 17,500 acres each, and, to prevent non-Indian encroachment on Pueblo lands, considered lands surrounding the grants as Spanish public domain. See, e.g., Nov. 14 Tr. at 3351:10-12 (Luebben, García y Griego); id. at 3395:1-10 (García y Griego).

148. Spain made its land grant to Jemez Pueblo around 1700 C.E. and measured the grant from Walatowa's center. See, e.g., Nov. 14 Tr. at 3449:6-17 (Leonard, García y Griego); id. at 3450:21-25 (García y Griego).

149. Although Spain granted some Pueblos more than 17,500 acres based on aboriginal title claims, Jemez did not receive additional acres.[78] See, e.g., Nov. 4 Tr. at 3451:6-13 (Leonard,

[77]Jemez Pueblo asks the Court to find that "[d]esignating 'Royal lands' under Spanish policy was Spain recognizing that the Pueblos could continue to use the lands they had traditionally used before the Spanish arrived." Jemez Pueblo's Proposed Findings ¶ 367, at 122 (citing Nov. 15 Tr. at 3564:16-25 (García y Griego)). The cited evidence, however, does not support the proposed fact. See Nov. 15 Tr. at 3564:16-25 (García y Griego)("The Spanish did not recognize religion, other than Catholicism, but . . . did not contest pueblo residents from grazing animals, for example, on what we would call Crown lands or public lands . . . . And collecting herbs."). Moreover, García y Griego further asserts that, although the Spanish permitted some traditional uses, religion was not one of them. See, e.g., Nov. 15 Tr. at 3564:20-21 (García y Griego); id. at 3565:1-4 (García y Griego)("I mentioned traditional uses in my report. As far as I know, all of those would have been permitted, with the exception, perhaps, of religion"). The Court, therefore, will not adopt the proposed fact.

[78]Jemez Pueblo asks the Court to find that "[t]he Pueblo League Grant did not extinguish Jemez Pueblo's aboriginal title to the Claim Area because Jemez was still allowed to use the Claim Area for its traditional uses," Jemez Pueblo's Proposed Findings ¶ 368, at 122, and that "Jemez's Four League Grant was simply a formal recognition by the King of Spain that the lands encompassed by the league grant were already the Pueblo's lands pursuant to traditional use and occupancy," Jemez

García y Griego)(affirming that the Spanish surveyor general recommended that Ysleta Pueblo receive 110,000 acres based on its aboriginal title claim); García y Griego Report at 15.

150. The Spanish did not recognize a Jemez Pueblo property interest in the Valles Caldera.[79] See, e.g., Oct. 30 Tr. at 584:24-585:14 (Marinelli, Liebmann)(affirming that the Spanish ended Jemez Pueblo's Banco Bonito occupation and removed Jemez Pueblo from the Valles Caldera region); Nov. 7 Tr. at 2168:20-2169:3 (Luebben, Madalena)(asserting that Spain "took ownership of our lands").

151. Spain's presence and colonial policies reduced Jemez Pueblo's population to below 1,000 individuals by the seventeenth-century's end, and, during this period, many Jemez Pueblo

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Pueblo's Proposed Findings ¶ 369, at 122-23. The proposed facts, however, are largely legal conclusions, and the Court, therefore, will not adopt them as findings of fact. Moreover, the Court finds that the Spanish curtailed significantly Jemez Pueblo's traditional Valles Caldera use, specifically by prohibiting Jemez Pueblo's ability to practice its religion. See, e.g., Nov. 15 Tr. at 3564:20-21 (García y Griego)("The Spanish did not recognize religion, other than Catholicism."); García y Griego Report at 33-34 ("Ruiz described having imposed a highly regimented approach to Hemish participation at mass: attendance was taken, seats were assigned and segregated to minimize interaction, guards posted to prevent the faithful from leaving church before its conclusion, and a whipping administered to those absent without valid excuse."). The Court, therefore, will not adopt the proposed facts.

[79]The United States asks the Court to find that "[t]he Spanish dispossessed Jemez of any interest in the Preserve lands." United States' Proposed Findings ¶ 46, at 16. The record does not support the proposed fact. The Court finds that, because many Pueblos used the Valles Caldera for over 800 years, Jemez Pueblo never had a cognizable property interest in those lands. See, e.g., Anschuetz Report at 34-53 (discussing the Jemez Mountains ancestral pueblo populations' Valles Caldera use based on archeological and tree-ring records); Anschuetz Rebuttal Report at 14-16 (asserting that, in addition to Jemez Pueblo, Tewa and Keres peoples possessed high-altitude agricultural skills sufficient to farm within the Valles Caldera). Moreover, the "interest" to which the United States refers is ambiguous, as the Court, for example, finds that Jemez Pueblo used the Valles Caldera during the Spanish Period, thereby evincing an interest in use for traditional purposes.

warriors fled to other Tribes and remained for years in areas as far away as Arizona.[80] See, e.g, Oct. 30 Tr. at 578:21-579:11 (Marinelli, Liebmann)(discussing Jemez Pueblo's population decline between 1681 and 1696 C.E.); García y Griego Report at 29-30 (discussing decline in the Pueblos' populations and Pueblo members' flights to other Tribes during the period surrounding the Pueblo revolt).

152. Spanish military forces defeated Jemez Pueblo in 1694 and 1696 C.E.[81] See, e.g., Nov. 14 Tr. at 3368:20-24 (García y Griego)("[A]mong the fiercest battles was the attack led by

[80]Jemez Pueblo asks the Court to find that "[v]arious battles between Jemez Pueblo and Spanish forces provide evidence that Jemez fiercely defended the Claim Area and actively resisted Spanish colonizing efforts." Jemez Pueblo's Proposed Findings ¶ 373, at 124 (citing Nov. 14 Tr. at 3368:7-24 (García y Griego); id. at 3453:12-3455:8 (García y Griego)). Although the support for the proposed fact establishes that Jemez Pueblo resisted Spanish colonizing efforts, and would have defended its mountain communities and use areas, the evidence does not assert that Jemez Pueblo defended specifically the Valles Caldera. See, e.g, Nov. 14 Tr. at 3368:7-24 (García y Griego)("I think all pueblos fiercely defended their traditional areas."); id. at 3453:12-3455:8 (García y Griego)(discussing Pueblo rebellions in 1694 and 1696 C.E.). The Court, therefore, will not adopt the proposed fact.

[81]Jemez Pueblo asks the Court to find that,

> [a]lthough the Jemez people were defeated by Spanish military forces in 1694 and 1696, . . . there is no evidence in the record that the Spanish attempted to prevent Jemez people from continuing their traditional religious, hunting, grazing and resource gathering uses of their wider aboriginal homeland beyond the confines of the four square Spanish Grant surrounding Walatowa, including the Jemez Mountains and the Valles Caldera.

Jemez Pueblo's Proposed Findings ¶ 672, at 208 (citing Nov. 14 Tr. at 3368:20-24 (García y Griego); id. at 3407:17-21 (García y Griego); García y Griego Report at 22). The record, however, does not support the proposed fact, because the record is replete with evidence that the Spanish attempted to prevent Jemez Pueblo from continuing its traditional religious practices. See, e.g., Nov. 15 Tr. at 3564:20-21 (García y Griego)("The Spanish did not recognize religion, other than Catholicism."); García y Griego Report at 33-34. The Court, therefore, will not adopt the proposed fact.

the Spanish, but aided with auxiliaries from Zia and Santa Ana pueblos in 1694 when de Vargas[82] did the reconquest. And then you have another uprising in 1696."); García y Griego Report at 27-29.

153. Jemez Pueblo abandoned its large Jemez Province villages for several years after the Pueblo Revolt,[83] from approximately 1696 to 1703 C.E. See, e.g., Dec. 13 Tr. at 5607:5-18 (Marinelli, Liebmann); García y Griego Report at 28-29.

[82]"Don Diego de Vargas[] was a Spanish Governor of the New Spain territory of Santa Fe de Nuevo México, to the US states of New Mexico and Arizona . . . . He is most famous for leading the reconquest of the territory in 1692 following the Pueblo Revolt of 1680." Diego de Vargas, Wikipedia, https://en.wikipedia.org/wiki/Diego_de_Vargas (last visited May 21, 2019).

[83]Jemez actively resisted the Spanish before and through the various Pueblo revolts until their defeat in 1696. See, e.g., Nov. 14 Tr. at 3376:17-3377:9 (García y Griego); García y Griego Report at 28-29. Active resistance took the form of killing the Franciscan friars and mass returns to the Jemez villages in the Jemez Mountains. See, e.g., Nov. 14 Tr. at 3381:10-25 (García y Griego); García y Griego Report at 29. The Jemez Pueblo members returned to the Jemez Mountains, where they had lived for hundreds of years before the Spanish arrived, in the early 1620s after burning down the Church in Walatowa, in 1640 in rebellion against the Spanish, in the 1680s during the Pueblo Revolt, and later when a measles epidemic spread through Walatowa. See, e.g., Nov. 14 Tr. 3381:10-25 (García y Griego); García y Griego Report at 24-29.

154. After the Pueblo Revolt, around 1696 C.E.,[84] some Jemez Pueblo members returned to their ancestral mountain villages, several of which Apache, Navajo[85] and Kewa peoples also occupied. See, e.g., Oct. 30 Tr. at 582:15 (Liebmann)("[W]e know that Patokwa was occupied at

[84]Jemez Pueblo asks the Court to find that, "[a]fter the last battle with the Spanish in 1696, Jemez Pueblo resisted the Spanish more passively. The Jemez would attend church and mass but continued their native religion including continuing to use the Claim Area for traditional uses like plant-gathering, grazing, hunting, and going to Redondo Peak." Jemez Pueblo's Proposed Findings ¶ 375, at 124 (citing Nov. 14 Tr. at 3377:15-3378:11 (García y Griego); id. at 3380:7-3381:21 (García y Griego); id. at 3382:2-3384:4 (García y Griego); id. at 3384:21-3385:1 (García y Griego)). The citations, however, do not support this proposed fact. Although the testimony to which Jemez Pueblo directs the Court establishes that Jemez Pueblo members continued to use the Jemez Mountains, they do not assert specifically that Jemez Pueblo used the Valles Caldera for religious purposes. See Nov. 14 Tr. at 3377:15-3378:11 (García y Griego); id. at 3380:7-3381:21 (García y Griego); id. at 3382:2-3384:4 (García y Griego); id. at 3384:21-3385:1 (García y Griego)). Moreover, García y Griego concedes that the documentary evidence is silent regarding whether Jemez Pueblo continued to practice its traditional religion during the early Spanish colonial period. See García y Griego Report at 33-34 (conceding that "[Fray Francisco Atanasio] Dominguez's report does not indicate that the Jemez practiced their native religion"). The Court, therefore, will not adopt the proposed fact with respect to Jemez Pueblo's Valles Caldera use for religious purposes.

[85]Although the Navajo Nation has never built a permanent settlement within the Jemez Mountains, see, e.g., Anschuetz Report at 18 ("Even though [Tribes including the Navajo Nation] might not directly occupy land within the Jemez Mountains' boundaries, these communities possess the same general kinds of privileges and responsibilities to interact with this range as do the Jemez Mountains Pueblos."); Kehoe Report at 6 ("[L]ike their Mexican and Spanish predecessors, American civil and military officials found themselves devoting much of their energies to pacifying the nomadic . . . Navajo Tribes, and protecting the settled communities of Mexicans, Pueblo Indians, and Anglos from their depredations."), or actively asserted aboriginal title to the Valles Caldera, see, e.g., Nov. 30 Tr. at 4876:13-4877:11 (Anschuetz); Dec. 3 Tr. at 4986:11-4988:7 (Anschuetz); Anschuetz Report at 20, Navajo Nation members have throughout history occupied those lands, see, e.g., Oct. 31 Tr. at 615:24-616:3 (Marinelli, Liebmann)(acknowledging that Navajo hogans along the ridge bordering the Valle Toledo in the Valles Caldera's northeast section indicate occupation); This Enchanted Land -- The Jemez Mountain Wonderland -- Los Alamos Scientific Laboratory at the University of California at 4 ("The longtime range manager [John Davenport] also recalls discovering Navajo hogans along a ridge bordering Valle Toledo in the Northeast section of the location."); Anschuetz Report at 19-20.

least until 1716."); Dec. 13 Tr. at 5605:13-5607:4 (Marinelli, Liebmann)(affirming that Jemez, Apache, Navajo, and Santo Domingo Pueblo members lodged at Patokwa and Boletsakwa in 1692-93 C.E.).

155. The Spanish's "Miera y Pacheco" map from 1779 C.E. is the first document that geographically identifies Jemez Mountains' location, although a 1728 C.E. land grant to Cañada de Cochiti identifies the Jemez Mountain's western boundaries.[86] E.g., Nov. 14 Tr. at 3358:25-3559:22 (Luebben, García y Griego); García y Griego Report at 35.

156. Jemez Pueblo had between 100 and 200 members in 1744 C.E.[87] See, e.g., Nov. 14 Tr. at 3370:22-3371:17 (García y Griego); Nov. 6 Tr. at 1916:11-1917:7 (Marinelli, Ferguson).

157. Pueblo populations, including Jemez Pueblo, began to recover after the mid-1700s, and Pueblo populations have trended upward since then. See, e.g., Nov. 14 Tr. at 3362:14-24 (García y Griego); id. at 3461-3463:9-15 (García y Griego).

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[86]Jemez Pueblo asks the Court to find that, before the Miera y Pacheco map, "there is no evidence that the Spanish knew of the Claim Area." Jemez Pueblo's Proposed Findings ¶ 364, at 121. The record, however, does not support the proposed fact, because the Spanish involuntarily removed Jemez Pueblo from its ten Jemez Mountains settlements beginning in 1598 C.E., see, e.g., Oct. 30 Tr. at 433 (West, Liebmann)(affirming that Jemez Pueblo members "were forced down to Walatowa"); Nov. 14 Tr. at 3369:3-15 (Luebben, García y Griego); id. at 3380:2-16 (García y Griego), which indicates an intimate familiarity with the Jemez Mountains region. The Court, therefore, will not adopt the proposed fact.

[87]Jemez Pueblo asks the Court to find that the United States' exhibit which states that Jemez Pueblo had 100 members in 1744 and 207 members in 1752 is "doubtful because those figures are demographically impossible." Jemez Pueblo's Proposed Findings ¶ 380, at 125 (citing Nov. 14 Tr. at 3370:20-3371:25 (García y Griego)). The Court agrees in part with Jemez Pueblo and, based on the record, finds a population range between 100 and 200 members during that time. See, e.g., Nov. 14 Tr. at 3371:15-17 (García y Griego)("So I suspect that number in 1744 is probably a bit low. But the 1750, maybe within range."); Joe Sando, Jemez Pueblo at 423, in Handbook of North American Indians (William Sturtevant, ed.)(1979), pages 418-31 admitted November 6, 2018, at trial as United States' Ex. DX-EK (describing Jemez Pueblo's population from 1744 to 1970 C.E.).

158. Jemez Pueblo's population remained below 1,000 individuals from 1700 C.E. through at least the early twentieth century.[88] See, e.g., Nov. 6 Tr. at 1916:11-1917:7 (Marinelli, Ferguson); García y Griego Report at 37-40.

159. A Jemez Pueblo member's life expectancy in the early nineteenth century was "low, even by the standards of the time, especially for women." García y Griego Report at 39. See, e.g., Nov. 14 Tr. at 3461:9-3462:8 (Leonard, García y Griego); García y Griego Report at 37-39.

160. Jemez Pueblo's average family size was lower than other Pueblos' average family size, which means that relatively few Jemez Pueblo children survived to adulthood.[89] See, e.g., Nov. 14 Tr. at 3461:15-3462:3 (Leonard, García y Griego); García y Griego Report at 37-38 (describing Jemez Pueblo's census results as 3.4 persons per family while other Pueblos averaged up to five people per family).

161. Although disease and warfare with the Spanish resulted in Jemez Pueblo's low population, relocation to Walatowa, and removal from the Banco Bonito during the Spanish

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[88]Population data that results from individual census, i.e., going from house to house to collect information on age, gender, and martial characteristics, allows historians to better evaluate the information's quality, unlike the population data that appears in secondary literature, which merely identifies presence in an area. See, e.g., Nov. 14 Tr. at 3370:10-21 (García y Griego); id. at 3390:2-3391:24 (Luebben, García y Griego).

[89]Jemez Pueblo asks the Court to find that "Jemez's population in the Spanish Period was similar to that of all other Pueblos. All Pueblos suffered a decline in population in the 1600s, primarily because of colonial violence and epidemics, and in the 1700s all Pueblo populations hit a low point." Jemez Pueblo's Proposed Findings ¶ 379, at 125 (citing Oct. 31 Tr. at 651:17-652:5 (Liebmann)). Although the record supports that all Pueblos suffered a population reduction during the Spanish period, see, e.g., Oct. 31 Tr. at 651:17-25 (Liebmann); García y Griego Report at 37, the record does not support the proposed fact that Jemez Pueblo had a population similar to all other Pueblos, see, e.g., Nov. 14 Tr. at 3461:15-3462:3 (Leonard, García y Griego); id. at 3462:9-12 (García y Griego)("I was surprised to discover that Zia, for example, had a very large population in the early 1700s."); García y Griego Report at 37-38. The Court, therefore, will not adopt the proposed fact.

colonial period, Jemez Pueblo did not cease using the Valles Caldera.[90] See e.g., Oct. 30 Tr. at 436:13-437:25 (Liebmann); Nov. 14 Tr. at 3364:4-10 (García y Griego); id. at 3364:11-13 (García y Griego).

162. Jemez Pueblo's low population during the eighteen and nineteenth centuries made it vulnerable to Navajo and Apache raids on Jemez Pueblo's animals and food.[91] See, e.g., Nov. 14 Tr. at 3372:1-14 (Luebben, García y Griego); García y Griego Report at 39-40.

163. Jemez Pueblo could not defend against Navajo, Apache, Ute, and Comanche attacks throughout the eighteenth century given its diminished military capabilities,[92] which was

[90]Jemez Pueblo asks the Court to find that, "[i]n fact, Jemez use of the Valles Caldera increased after Pueblo Revolt." Jemez Pueblo's Proposed Findings ¶ 378, at 125 (citing Oct. 30 Tr. at 437:21-25 (Liebmann)). The record does not support the proposed fact. Liebmann limits his testimony to the Pueblo Revolt period, see Oct. 30 Tr. at 437:21-25 (Liebmann)(affirming that, "[w]ith the Spaniards gone," Jemez Pueblo used Cerro del Medio obsidian extensively), and, although the record establishes that Jemez Pueblo returned to several of its Jemez Mountains villages following the Pueblo Revolt, see, e.g., Oct. 30 Tr. at 582:15 (Liebmann); Dec. 13 Tr. at 5605:13-5607:4 (Marinelli, Liebmann), and used the Valles Caldera during this period, see, e.g., Oct. 30 Tr. at 429:14-20 (Liebmann); Liebmann Report at 33, it does not support that Jemez Pueblo sustained any increased Valles Caldera use after the Spanish decisively defeated Jemez Pueblo in 1694 and 1696 C.E, see, e.g., Nov. 14 Tr. at 3368:20-24 (García y Griego); García y Griego Report at 27-29. The Court, therefore, will not adopt the proposed fact.

[91]Jemez Pueblo's military was primarily a defensive military. See, e.g, Nov. 14 Tr. at 3365:9 (García y Griego); García y Griego Report at 22, 26-27.

[92]Jemez Pueblo asks the Court to find that "Jemez had the military capability to defend its traditional use areas regardless of its particular population at a particular time," Jemez Pueblo's Proposed Findings ¶ 386, at 127 (citing Nov. 4 Tr. at 1279:8-23 (Whatley); id. at 1291:4-17 (Whatley); Nov. 14 Tr. at Tr. 3364-3365:14-13 (García y Griego); id. at 3375:10-22 (García y Griego)), and that, "[t]hroughout the 17th and 18th century, Jemez had enough able-bodied warriors to mobilize for purposes of controlling the Claim Area from other non-Jemez people," Jemez Pueblo's Proposed Findings ¶ 388, at 127 (citing Nov. 14 Tr. at 3464:14-3465:1 (García y Griego)). The record does not support the proposed fact, because, although the Court finds that Jemez Pueblo would have resisted non-Jemez incursion onto its traditional lands, see e.g., Oct. 30 Tr. at 367-368:1-4 (Liebmann); Nov. 14 Tr. at 3369:3-15 (Luebben, García y Griego); id. at 3380:2-16 (García y Griego), the Court also finds that Jemez Pueblo lacked a population sufficient to defend against non-Jemez efforts to use those

a function of its small population size. See, e.g., Nov. 15 Tr. at 3364:17-21 (Luebben, García y Griego)("[T]he military capability of the pueblos, the Hemish and other pueblos, as well, would have been primarily a function of their population size."); id. at 3365:14-3366:6 (Luebben, García y Griego).

164. Navajo, Apache, and Ute Tribes grew in power during the seventeenth century after adopting an equestrian lifestyle, which allowed for an "escalation in raiding and violence that . . . transformed the Valles Caldera into a dangerous place" and, among other things, decreased Jemez Pueblo's access to Cerro del Medio obsidian.[93] Oct. 30 Tr. at 585:18-586:25 (Marinelli, Liebmann). See Landscapes of Signification at 656 ("The same factors that caused the decrease in Jemez[']s use of Cerro del Medio obsidian prior to the 1680 Revolt came into play yet again, with hostilities between the Pueblos and their Navajo and Apache neighbors waxing in the years after the Spanish reconquest of New Mexico.").

165. The Spanish used Jemez warriors to fight against the Navajos, Apaches, Utes, and Comanche in the seventeenth and eighteenth centuries,[94] and to implement a defensive strategy

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lands, see, e.g., Nov. 14 Tr. at 3364:17-21 (García y Griego); id. at 3464:18-19 (García y Griego)(acknowledging that Jemez Pueblo lacked sufficient population and capability to "prevent[] everybody from going in [the Valles Caldera]"). Hence, the Court will not adopt the proposed fact.

[93]The United States asks the Court to find that, "[a]fter 1700, Plaintiff could not maintain any alleged aboriginal title to any portion of the Preserve lands." United States' Proposed Findings ¶ 51, at 17 (citing Oct. 30 Tr. at 585:18-586:25 (Liebmann); Landscapes of Signification at 656). The cited evidence, however, asserts merely that Navajo, Apache, and Ute presence in the Valles Caldera region increased, and made difficult Jemez Pueblo's access to Cerro del Medio obsidian. See Oct. 30 Tr. at 585:18-586:25 (Marinelli, Liebmann); Landscapes of Signification at 656. The Court, therefore, will not adopt the proposed fact.

[94]Jemez Pueblo asks the Court to find that the Spanish used Jemez Pueblo warriors "because Jemez had the military capability of doing so." Jemez Pueblo's Proposed Findings ¶

against Navajo attacks. See, e.g, Nov. 14 Tr. at 3365:14-19 (García y Griego); id. at 3369:16-3370:9 (Luebben, García y Griego); id. at 3385:2-7 (García y Griego).

166. Since at least 1300 C.E., Jemez Pueblo lacked the military power and population to prevent Tewa and Keres Pueblos, and more numerous and powerful Navajo and Apache Tribes, from accessing the Valles Caldera. See, e.g., Nov. 30 Tr. at 4729:6-4734:4 (Marinelli, Anschuetz); Anschuetz Rebuttal Report at 26-35.

167. The Navajo camped and worshiped in the Valles Caldera, and worshiped at Redondo Peak, because Redondo Peak is the Navajo's sacred eastern mountain. See, e.g., Dec. 3 Tr. at 4992:23-4993:6 (Ferguson); Frederick W. Sleight, The Navajo Sacred Mountain of the East: A Controversy at 384 (1951), admitted October 29, 2018, at trial as United States' Ex. DX-CB)(identifying Redondo Peak as the Navajo Nation's Holy Mountain of the East); Navajo Indians I at 125.

168. Navajo peoples at least twice drove Jemez Pueblo members from the Valles Caldera. See, e.g., Nov. 6 Tr. at 1958:24-1961:19 (Marinelli, Ferguson).

387, at 127 (citing Nov 14 Tr. at 3365:14-19 (García y Griego); id. at 3369-3370:16-9 (García y Griego)). The record indicates, however, that the Spanish involuntarily conscripted able-bodied, Jemez Pueblo warriors regardless ability or whether Jemez Pueblo's population could afford to field a fighting force. See, e.g., Nov. 14 Tr. at 3365:15-17 (García y Griego)("And in fact, the Spanish relied principally on pueblo warriors, Jemez, among others in the 17th century."); García y Griego Report at 28 (describing Spain's return of captured Jemez women and children "with the condition that Jemez warriors assist in an attack on San Ildefonso"). The Court, therefore, will not adopt the proposed fact.

169. Jemez Pueblo did not continuously graze its herd within the Valles Caldera between 1629 and 2000 C.E. See, e.g., Nov. 15 Tr. at 1915:19-25 (Marinelli, Ferguson); Ferguson Report at 67.

5. Jemez Pueblo Was Not the Valles Caldera's Primary User During the Period After the United States Acquired New Mexico from Mexico.

170. As part of the postwar settlement between the United States and Mexico[95] in 1848, the Treaty of Guadalupe-Hidalgo provided that the United States would evaluate all land grants from the Spanish and Mexican governments, and, if found valid, the United States would honor such grants. See Treaty of Guadalupe Hidalgo, U.S.-Mex., Feb. 2, 1848, art. VIII, 9 Stat. 922, 928-30.

171. In 1851, United States Army contractors, pursuant to United States Army directives, established a hay camp within the Valles Caldera. See, e.g., Trial Transcript at 4182:1-16 (taken Nov. 19, 2018), filed February 12, 2019 (Doc. 359)("Nov. 19 Tr.")(Petti, Kehoe); VCNP Land Use History at 27.

[95]Mexico won independence from Spain in 1821. See, e.g., VCNP Land Use History at 26; Mexican War of Independence, Wikipedia, https://en.wikipedia.org/wiki/Mexican_War_of_Independence (last visited May 23, 2019). The Court notes that the Mexican government was virtually absent from the Jemez Mountains during the Mexican period, which spanned from 1821 to 1848. See Nov. 14 Tr. at 3407:10-16 (García y Griego); id. at 3387 (García y Griego). The Court agrees, however, with García y Griego's conclusion that, although there are minimal historical records from the 18th century, the Jemez people continued to use the Valles Caldera in the 18th century, see Nov. 14 Tr. at 3387:5-3388:9 (García y Griego), because to conclude otherwise would require the Court to adopt an illogical assumption, i.e., that Jemez Pueblo's Valles Caldera use stopped abruptly in the 18th century and restarted in the 19th century. The Court further agrees with García y Griego that a historian can make a credible, educated inference that a given Pueblo's land use continued based on past uses and present uses. See Nov. 14 Tr. at 3387:8-22 (García y Griego).

172. Jemez Pueblo did not dispute the United States Army's presence in the Valles Caldera. See, e.g., Nov. 14 Tr. at 3385:21-3386:2 (García y Griego)("I don't think that the pueblos would have wanted to attack the U.S. Army, this Army had obviously superior military capabilities."); VCNP Land Use History at 27.

173. On July 2, 1851, near the Jemez River's East Fork, thirty-five to forty Navajo raiders attacked the hay camp and stole six horses and forty-three mules. See, e.g., Kehoe Report at 6-7; VCNP Land Use History at 27.

174. Eleven Jemez Pueblo herders tending cattle near the hay camp attacked the Navajo raiders, killing two, and recapturing five mules. See, e.g., Nov. 15 Tr. at 3555:2-12 (Luebben, García y Griego); Kehoe Report at 6-7; VCNP Land Use History at 27.

175. In 1856, New Mexico militiamen tracked Navajo Nation raiders into the Valle Grande, where Navajo Nation members were tending livestock, killed two Navajo Nation members, and recovered a stolen flock. See, e.g., VCNP Land Use History at 27; Kehoe Report at 7.

176. In the late 1800s, Jemez Pueblo stockmen attacked a Navajo group residing in the Valle Grande's southwest corner, killing at least one and driving the others from their Valles Caldera camp. See, e.g., Nov. 19 Tr. at 4213:3-6 (Marinelli, Kehoe); VCNP Land Use History at 27; Ferguson Report at 56.

177. The United States Army and associated contractors were the Valles Caldera's only occupants in the 1850s and 1860s, although multiple Pueblos, Tribes and non-Indians wandered throughout the area during this period. See, e.g., 4169:24-4170:8 (Marinelli, Kehoe); Kehoe Report at 8; VCNP Land Use History at 27-28.

178. In August, 1863, the United States Army established a military outpost on the Valle Grande ("Valle Grande outpost") that operated continuously until May, 1864. See, e.g., Letter from Lieutenant Samuel Barr to Captain Ben Cutler at 1 (dated May 31, 1864), admitted October 29, 2018, at trial as United States' Ex. DX-O (reporting three officers and thirty-seven enlisted men stationed at the Valle Grande outpost); Letter from Lieutenant Barr to Assistant Adjutant General at 1 (dated June 4, 1864), admitted October 29, 2018, at trial as United States' Ex. DX-P; VCNP Land Use History at 27; Kehoe Report at 7.

179. No Pueblos or Tribes were using the Valle Grande to graze animals when the United States Army established the Valles Grande outpost. See, e.g., Nov. 16 Tr. at 4008:8-22 (Marinelli, Kehoe); Letter from Lieutenant Erastus W. Wood to Captain Ben Cutler at 1 (dated Aug. 24, 1863), admitted October 29, 2018, at trial as United States' Ex. DX-F (noting that "[t]here are no Indians in the neighborhood and no sign of any having been here for several weeks").

180. During the months in which the United States Army occupied the Valles Caldera, the commanding officers recorded Pueblo Indians and Hispanics traveling unhindered across the Valle Grande. See, e.g., Letter from Lieutenant Charles Curtis to Captain Ben Cutler at 1 (dated Dec. 27, 1863), admitted October 29, 2018, at trial as United States' Ex. DX-M; Letter from Lieutenant Charles Curtis to Captain Ben Cutler at 1 (dated Jan. 5, 1864), admitted October 29, 2018, at trial as United States' Ex. DX-N.

181. In September, 1863, local Hispanics requested and received the United States Army's permission to bring their families and livestock onto the Valle Grande for the winter, and no Indians opposed or interfered with this activity. See, e.g., Letter from Lieutenant P.A. J. Russell to Captain Ben Cutler at 1 (dated Sept. 17, 1863), admitted October 29, 2018, at trial as United

States' Ex. DX-I; Letter from Captain Ben Cutler to Lieutenant P.A. J. Russell at 1 (dated Sept. 1863), admitted October 29, 2018, at trial as United States' Ex. DX-H.

182. In September, 1863, United States Army soldiers from the Valle Grande outpost, and approximately fifty Ute, Santa Clara Pueblo, and San Ildefonso Pueblo warriors trailed Navajo raiders from the Valles Caldera to Walatowa, where the Navajos were receiving shelter from Jemez Pueblo. See, e.g., Nov. 16 Tr. at 4008:23-4016:11 (Marinelli, Kehoe); Letter from Lieutenant P.A. J. Russell to Captain Ben Cutler at 1-2 (dated Oct. 1, 1863), admitted October 29, 2018, at trial as United States' Ex. DX-J ("Oct. 1863 Letter"); Kehoe Report at 8, 62-66.

183. Jemez Pueblo leaders permitted the United States Army to search Walatowa, whereupon the Army discovered, captured, and killed several Navajo, and retrieved Santa Clara Pueblo's and San Ildefonso Pueblo's stolen livestock.[96] See, e.g., Nov. 16 Tr. at 4008:23-4016:11 (Marinelli, Kehoe); Oct. 1863 Letter at 1-2; Kehoe Report at 8, 62-66.

[96]Jemez Pueblo asks the Court to find that "[t]he only Navajo raid of livestock belonging to a pueblo within the Claim Area was that belonging to Jemez Pueblo." Jemez Pueblo's Proposed Findings ¶ 645, at 203 (citing Nov. 16 Tr. at 4012:6-4016:11 (Kehoe); Kehoe Report at 7-9, 62-64; Valles Caldera Land Use History at 37; Valle Grande at 20-21; Oct. 1863 Letter at 1-2; Anschuetz Report at 20). The cited support references, however, an event wherein Navajo members stole livestock from the Santa Clara Pueblo and San Ildefonso Pueblo, and indicates that this livestock was grazing in or near the Valle Grande. See, e.g., Oct. 1863 Letter at 1 ("[A] party of Ute and Pueblo Indians . . . from Santa Clara and San Ildefonso came into my camp and reported that a lot of stock had been stolen from the latter by the Navajo, and that . . . the Navajos . . . had crossed the valley at its southern extremity . . . ."); Anschuetz Report at 20 ("Lt. P. A. J. Russell field [sic] a report in 1893 about a punitive expedition to track and punish a Navajo raiding party, which had recently stolen livestock from the Pueblos along the Rio Grande."). The Court, therefore, will not adopt the proposed fact.

184. Jemez Pueblo had poor relations with Santa Clara Pueblo and San Ildefonso Pueblo in the nineteenth century. See, e.g., Oct. 1863 Letter at 1 (quoting the Santa Clara war party leader as saying that Jemez Pueblo was "little better than the Navajo"); Kehoe Report at 64.

185. In October, 1863, a Navajo force totaling approximately 200 warriors attacked the Army's Valle Grande outpost and succeeded in stealing the outpost's cattle herd. See, e.g., Letter from Lieutenant Charles Curtis to Captain Ben Cutler at 1 (dated Oct. 30, 1863), admitted October 29, 2018, at trial as United States' Ex. DX-K; Kehoe Report at 9.

186. In late December, 1863, the United States Army encountered, and assisted, a Santo Domingo Pueblo war party pursuing Navajo raiders through the Valles Caldera. See, e.g., Nov. 16 Tr. at 4017:2-4018:4 (Marinelli, Kehoe); Kehoe Report at 9; Letter from Lieutenant Charles Curtis to Captain Ben Cutler at 2 (dated Dec. 27, 1863), admitted October 29, 2018, at trial as United States' Ex. DX-M.

187. In the 1880s, "Jemez Country" excluded, at a minimum, the clear majority of the Valles Caldera. A.F. Bandelier,[97] Final Report of Investigations Among the Indians of the Southwestern United States, Carried on Mainly in the Years from 1880-1885 at 201-02 (1892),

[97]During Adolph Bandelier's travels throughout the Valles Caldera, while studying New Mexico's Pueblos in the 1880s, he stated that "a huge mountain mass, the Sierra de la Jara, interposes itself between the principal valley, that of Toledo, and the Jemez country." Indian Investigations at 201. Bandelier identified the huge mountain mass that separates "Jemez Country" from the "principal valley" as an 11,260-foot mountain called "Jara Mountain" or "Cerro Pelado." Indian Investigations at 201-02. See Map Utilized in Court by Witness Virgil Gachupin at 1 (undated), admitted December 12, 2018, at trial as Jemez Pueblo's Ex. PX 581 (depicting Redondo Peak as 11,254 feet tall); Navajo Indians I at 128 (noting that Redondo Peak was previously called Cerro Pelado).

pages 139-218 admitted November 7, 2018, at trial as United States' Ex. DX-S ("Indian Investigations")("The country inhabited by the Jemez tribe lies west of the Valles.").

188. When the United States acquired New Mexico from Mexico, the Valles Caldera was a thoroughfare that many Indian and non-Indian peoples accessed and used. See, e.g., Nov. 16 Tr. at 4004:16-4008:4 (Marinelli, Kehoe); Letter from Brigadier General James H. Carleton to [illegible] at 1 (dated Aug. 1863), admitted October 29, 2018, at trial as United States' Ex. DX-E; VCNP Land Use History at 27-28.

6. The Valles Caldera's Private Owners Restricted Jemez Pueblo's and Other Pueblo's Valles Caldera Use.[98]

189. In 1855, Luis Maria Cabeza de Baca's heirs ("Baca heirs") submitted a land claim to the Surveyor General of New Mexico, pursuant to the Treaty of Guadalupe Hidalgo, seeking to determine their 1821 Mexican land grant's validity for land near Las Vegas, New Mexico. See, e.g., VCNP Land Use History at 37; Kehoe Report at 10.

[98]The United States proposes a heading that asks the Court to find that such restriction occurred "in a manner that substantially interfered with Plaintiff's alleged uses, thereby preventing Plaintiff from establishing continuous use." United States' Proposed Findings at 59. The proposed heading is, however, a legal conclusion, and the Court, therefore, will not adopt it as a finding of fact. Moreover, although the Tenth Circuit states in this case that gradual taking by the United States can extinguish aboriginal title, see 790 F.3d at 1166 (citing United States v. Pueblo of San Ildefonso, 513 F.2d at 1393 ("The Court of Claims' decision in [United States v.]*Pueblo of San Ildefonso* . . . is illustrative of a situation in which white settlement and use, authorized by the federal government . . . brought about a pre-1946 claim against the United States for failure to protect aboriginal title.")), the Court has noted that private action cannot effect aboriginal title extinguishment absent Congressionally authorized interference, see Pueblo of Jemez v. United States, Oct. 25 MOO at 44, 350 F. Supp. 3d at 1120 (listing factors that the Court will consider to determine whether "the United States substantially interfered with aboriginal title over time so as to effectuate a gradual taking absent express Congressional intent"). Hence, the Court declines to adopt the proposed fact for the additional reason that private land owner's restrictions on aboriginal territory use, however onerous, are insufficient to extinguish aboriginal title.

190. In 1860, the Office of the Surveyor General of New Mexico determined that, although the Baca heirs' grant was valid, it largely overlapped with the equally valid Town of Las Vegas Community Grant. See, e.g., VCNP Land Use History at 37; Kehoe Report at 10.

191. On June 21, 1860, to settle the conflict between the Baca heirs' grant and the Town of Las Vegas Community Grant, the United States Congress enacted the Act of June 21, 1860, 12 Stat. 71, authorizing the Baca heirs to select up to five unspecified square tracts of vacant land totaling up to 496,447 acres anywhere within the Territory of New Mexico. See, e.g., Nov. 15 Tr. at 3516:17-18 (García y Griego); Kehoe Report at 10; VCNP Land Use History at 37-38.

192. On December 11, 1860, the Baca heirs selected their first parcels of land in and adjacent to the Valles Caldera. See, e.g., Pueblo of Jemez v. United States, Oct. 25 MOO at 7, 350 F. Supp. 3d at 1060 (citing United States v. Redondo Development Co., 254 F. at 657); VCNP Land Use History at 38; Certification of Surveyor General's Office, Santa Fe, signed by A. P. Wilbar (dated Dec. 11, 1860), admitted October 29, 2018, at trial as United States' Ex. DX-C (noting that the lands were "known to be vacant and not mineral"); Pueblo of Jemez Strategic Plan 2000 at 8 ("Baca Location No. 1 was surveyed . . . and patented to private owners. . . . In this way, large parts of [Jemez Pueblo's] aboriginal lands were permanently lost.").

193. On September 30, 1876, the General Land Office approved the first Baca Location No. 1 survey. See Surveyor General's Office, Santa Fe, New Mexico, Field Notes of the Survey of Baca Location No. 1 at 15 (dated Sept. 30, 1876), admitted October 29, 2018, at trial as United States' Ex. DX-Q; VCNP Land Use History at 33; Kehoe Report at 10-11.

194. The Baca heirs established grazing operations within the Valles Caldera in the 1870s, and, by the late 1800s, sheep and other livestock grazed Baca Location No. 1 in significant

numbers. See, e.g., Surveyor General's Office, Santa Fe, New Mexico, Field Notes of the Survey of Baca Location No. 1 at 14-15 (dated Sept. 30, 1876), admitted October 29, 2018, at trial as United States' Ex. DX-Q; Indian Investigations at 200; VCNP Land Use History at 37; Kehoe Report at 11-12.

195. By 1883, the Baca heirs had established two ranches within the Valles Caldera. See, e.g., Nov. 16 Tr. at 4023:2-12 (Marinelli, Kehoe); Dan Scurlock, Pastores of the Valles Caldera, 88 El Palacio, at 3-5 (1982), pages 2-11 admitted October 29, 2018, at trial as United States' Ex. DX-FP ("Pastores of the Valles Caldera"); Kehoe Report at 11.

196. Herders paid the Baca heirs to graze livestock on the Valle Grande. See, e.g., Pastores of the Valles Caldera at 3-5; Kehoe Report at 11.

197. Large flocks of sheep grazed the Valles Caldera in the 1870s and 1880s. See, e.g., Nov. 16 Tr. at 4026:2-10 (Marinelli, Kehoe); Kehoe Report at 11; Indian Investigations at 200.

198. Jemez Pueblo did not own sheep in the 1870s and 1880s. See, e.g., Nov. 16 Tr. at 4024:10-22 (Marinelli, Kehoe); Kehoe Report at 11-12.

199. In January, 1899, the District Court of the County of Bernalillo, Territory of New Mexico, ordered Baca Location No. 1's sale at public auction to resolve competing interests acquired through inheritance and purchase. See Kehoe Report at 13; VCNP Land Use History at 38-39.

200. On March 18, 1899, the District Court of the County of Bernalillo, Territory of New Mexico, approved Baca Location No. 1's sale to Frank Clancy, who on the same day sold Baca Location No. 1 to the Valles Land Company, which Mariano Otero and his son owned. See Kehoe Report at 13; Whitney v. Otero , CIV. No. 3632, Order Approving Report and Confirming Sale at

1-2 (dated March 18, 1899), admitted October 29, 2018, at trial as United States' Ex. DX-Y; Bargain & Sale Deed, F. Clancy to Valles Land Co. at 100 (dated March 18, 1899), admitted October 29, 2018, at trial as United States' Ex. DX-X.

201. In the early 1900s, the Valles Land Company charged livestock operators grazing fees to place their livestock on the Baca Location No. 1's range lands. See, e.g., Kehoe Report at 13 ("The Valles Land Company charged the following grazing fees per head: cattle and horse, $1 dollar; goats, 10 cents; and sheep, 6 cents."); Pastores of the Valles Caldera at 4-5.

202. On October 16, 1909, the Valles Land Company deeded Baca Location No. 1 to the Redondo Development Company, which concluded its purchase in 1913 after completing a series of installment payments totaling $247,512.00. See, e.g., Nov. 16 Tr. at 3991:19-3993:3 (Marinelli, Kehoe); Warranty Deed, Valles Land Co. to Redondo Development Co. at 102 (dated Oct. 16, 1909), admitted October 29, 2018, at trial as United States' Ex. DX-AH; Deed of Trust, Redondo Development Co. to W. Strickler, Trustee for the Valles Land Co. at 103 (dated Oct. 16, 1909), admitted October 29, 2018, at trial as United States' Ex. DX-AH; Deed of Release, W. Strickler, Trustee, to Redondo Development Co. at 104 (dated Jan. 27, 1913), admitted October 29, 2018, at trial as United States' Ex. DX-AH.

203. The Redondo Development Company leased Baca Location No. 1 to livestock operators who sub-leased the lands to other operators. See, e.g., U.S. Forest Service, Range Appraisal Report for the Santa Fe Nat'l Forest at 6 (dated Sept. 17, 1924), admitted October 29, 2018, at trial as United States' Ex. DX-BA ("Range Appraisal Report"); Kehoe Report at 14.

204. The Redondo Development Company began fencing the Valles Caldera in 1910, which led to a dispute with the United States over Baca Location No. 1's boundary. See, e.g.,

Kehoe Report at 15; Letter from C. W. Stone, President of Redondo Development Company, Petition to Fred Dennett, Commissioner of the General Land Office at 1 (dated July 13, 1910), admitted October 29, 2018, at trial as United States' Ex. DX-AE; Memorandum from Assistant Attorney General, U.S. Department of Justice to Secretary of the Interior providing final decree in Cause No. 333, United States v. Redondo Dev. Co. in the District of New Mexico at 1 (dated Dec. 13, 1916), admitted October 29, 2018, at trial as United States' Ex. DX-AK (noting fencing effort and that Baca Location No. 1's owners prevailed against the United States).

205. In 1917 and 1918, Frank Bond leased Baca Location No. 1 for livestock use, and then sub-leased his interests to many small operators, who paid Bond grazing fees based on the numbers of cattle or sheep grazed. See, e.g., Range Appraisal Report at 6; Kehoe Report at 15.

206. As part of his lease agreement with Redondo Development Company, Bond agreed to finish fencing Baca Location No. 1's perimeter, and his men completed the fence around Baca Location No. 1 by the end of 1917. See, e.g., Letter from Frank Bond to P. T. Lonergan, BIA Superintendent, Pueblo Agency, BIA Superintendent, Pueblo Agency at 1 (dated July 21, 1917), admitted October, 29, 2018, at trial as United States' Ex. DX-AP; Inventory, Quemondo Sheep Co. at 4 (dated Nov. 20, 1917), admitted October, 29, 2018, at trial as United States' Ex. DX-AS.

207. On December 14, 1918, the Redondo Development Company, and Frank and George Bond ("the Bonds"), entered into a memorandum of agreement to sell Baca Location No. 1 for $400,000.00 through a series of installment payments. See, e.g., Nov. 16 Tr. at 3993:4-3995:16 (Marinelli, Kehoe); Mem. of Agreement between Redondo Development Co. and Frank and G. Bond for the Sale of Baca Location No. 1 at 276-81 (dated Dec. 14, 1918), admitted November 16, 2018, at trial as United States' Ex. DX-DJ ("Redondo MOA").

208. The Baca Location No. 1 sales agreement excluded the tract's forest resources, reserving to the Redondo Development Company and its successors the right to remove and sell all timber for a ninety-nine-year period. See, e.g., Nov. 16 Tr. at 3993:4-3995:16 (Marinelli, Kehoe); Redondo MOA at 276-81.

209. The Bonds assumed possession of Baca Location 1 on January 1, 1919. See, e.g., Indenture Between Redondo Development Co. and George and Frank Bond at 22-25 (dated April 8, 1926), admitted October 29, 2018, at trial as United States' Ex. DX-BC; VCNP Land Use History at 42.

210. Before 1920, Jemez Pueblo grazed animals on lands that the Forest Service owned and on privately held lands outside the Valles Caldera. See, e.g., Nov. 16 Tr. at 4046:17-4048:5 (Marinelli, Kehoe), id. at 4050:13-4051:12 (Marinelli, Kehoe); H. F. Goggeshall, Assistant Chief Special Officer, BIA, to W.E. Johnson, Chief Special Officer, 11/14/1910, and attached statement from Jose Romero, Governor of the Pueblo of Jemez, 10/6/1910, Statement of Jemez Governor Jose Romero (dated Oct. 6, 1910), admitted October 29, 2018, at trial as United States' Ex. DX-AF-3; Kehoe Report at 18-19.

211. Bond insisted that Jemez Pueblo pay his standard fees if Jemez Pueblo wanted to graze its livestock within the Valles Caldera. See, e.g., Nov. 16 Tr. at 4027:16-4028:14 (Kehoe, Marinelli)(discussing the partido system[99] as requiring payment to the Valles Caldera's

[99]Herders did their grazing under the partido system, which refers to

> an arrangement in which the patron leased a small number of sheep to a herder in exchange for a percentage of the annual increase of the sheep and the wool sheared from all the sheep. The herder was responsible for any losses to the flock and also had to cover all expenses, including grazing fees. Under these partido

landowners in exchange for grazing rights); id. at 4033:2-16 (Kehoe, Marinelli)(asserting that Bond kept close tabs on Valles Caldera grazing activity); id. at 4049:3-25 (Kehoe, Marinelli)(discussing Bond's 1918 letter that required a Jemez member to pay grazing fees in exchange for Valles Caldera grazing rights); Letter from Frank Bond to Jose Antonio Pecos at 1 (dated June 19, 1918), admitted October 29, 2018, at trial as United States' Ex. DX-AV.

212. Bond's grazing restrictions physically, spiritually, and psychologically harmed Jemez Pueblo. See, e.g., Nov. 6 Tr. at 1917:16-1920:6 (Marinelli, Ferguson)(discussing the physical, spiritual, and psychological harm that Bond's grazing restrictions did to Jemez Pueblo); Trial Transcript at 2585:25-2586:7 (taken Nov. 9, 2018), filed January 25, 2019 (Doc. 351)("Nov. 9 Tr.")(Marinelli, Madalena)(affirming that pre-2000 Valles Caldera restrictions caused Jemez Pueblo spiritual injury).

213. Bond sought to maximize Baca Location No. 1's profitability by grazing as many livestock as possible without exceeding the Valles Caldera's carrying capacity. See, e.g., Nov. 16 Tr. at 4026:18-4030:21 (Marinelli, Kehoe); id. at 4032:6-4035:20 (Marinelli, Kehoe); Letter from Frank Bond to W. P. Cook at 1 (dated Jan. 6, 1933), admitted October 29, 2018, at trial as United States' Ex. DX-BI; Letter from Unsigned to M. C. de Baca at 1 (dated Nov. 23, 1928), admitted October 29, 2018, at trial as United States' Ex. DX-BE; Hispanic Villages of Northern New Mexico: A Reprint of the 1935 Tewa Basin Study at 216-17 (Marta Weigle, ed., 1975), pages 119-21, 212-19 admitted November 16, 2018, at trial as United States' Ex. DX-EF.

> arrangements, the patron had a strong incentive to carefully monitor the activities of those herders renting sheep from him.

Kehoe Report at 12 (footnote omitted)(citing Pastores of the Valles Caldera at 3-4).

214. In a 1933 letter, the New Mexico State Game Warden asked Bond to continue to keep certain streams within Baca Location No. 1 open to the public for fishing. See, e.g., Letter from Elliott Barker, State Game Warden, to Frank Bond at 1 (dated June 3, 1933), admitted October 29, 2018, at trial as United States' Ex. DX-BJ; Kehoe Report at 24.

215. Jemez Pueblo members sought Bond's permission to access the Valles Caldera for traditional purposes.[100] See, e.g., Nov. 1 Tr. at 1120:3-21 (Weslowski); Weslowski Notes at 1 (undated), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 184.

[100]Jemez Pueblo asks the Court to find that "Jemez people hunted in the Valles Caldera during Bond ownership and did not seek permission from the Bond owners, nor did the Bond owners restrict where Jemez people could hunt, nor did the Bond owners limit the number of game that Jemez could take." Jemez Pueblo's Proposed Findings ¶ 701, at 216 (citing Oct. 29 Tr. at 235:1-12 (P. Tosa); id. at 237:1-238:25 (P. Tosa); id. at 276:2-20 (P. Tosa); Nov. 1 Tr. at 860:6-861:25 (Richardson, P. Correo); García y Griego Report at 46). The record does not support the proposed fact, see, e.g., Nov. 1 Tr. at 1120:3-21 (Weslowski); High Altitude Adaptations at 115; Kehoe Report at 34 (describing how Bond employees chased at gunpoint a Zia Pueblo member from the Valles Caldera), and two citations for the proposed fact rely on inadmissible hearsay, see Oct. 29 Tr. at 237:1-238:25 (Solimon, P. Tosa)(describing seven locations which, according to Tosa's grandfather, are hunt camps); id. at 276:9-20 (Solimon, P. Tosa)(describing Tosa's father and grandfather's agreement to leave deer for the Bond's ranch manager). Although the Court finds that Jemez Pueblo members hunted within the Valles Caldera during the Bond ownership period, the Court finds that the Bonds did not knowingly permit Jemez Pueblo to hunt, and the cited testimony does not assert that any Jemez Pueblo members received permission to hunt from the Bonds, but rather suggests that, when Bond denied Jemez Pueblo permission to use the Valles Caldera for traditional purposes, Jemez Pueblo members disregarded Bond's prohibitions and trespassed over the Valles Caldera without the Bond's knowledge. See, e.g., Nov. 1 Tr. at 860:10-13 (Richardson, P. Correo)("[The Bonds] didn't live there in the wintertime, so we hunted in the wintertime."); García y Griego Report at 46 ("[M]en would collect medicinal herbs without asking for permission of the Bonds, grazed cattle, hunting deer, turkey, and rabbits, hunted in the Caldera without permission from the Bond family."). Hence, the Court will not adopt the proposed fact so far as the proposed fact asserts that the Bonds granted Jemez Pueblo an unrestricted right to hunt within the Valles Caldera.

216. The Bonds granted Zia Pueblo permission to visit cultural and religious sites within the Valles Caldera on an ad hoc basis. See, e.g., Religious Freedom at 32 ("Bond gave the Indians permission when asked.").

217. In the 1920s, a conflict between Bond and Jemez Pueblo resulted in Bond prohibiting Jemez Pueblo from grazing in the Valles Caldera. See, e.g., High Altitude Adaptations at 115; Designation of Deposition Testimony -- Romero at 37:3-38:18, admitted November 20, 2018, at trial as United States' Ex. DX-JX-4 (Romero)(stating that for three generations the Romero family has not grazed cattle within the Valles Caldera), id. at 40:6-23 (Romero)(affirming that Jemez Pueblo horse grazing in the Valles Caldera occurred before 1920), id. at 82:21-83:12 (Romero)(affirming that Jemez Pueblo was not allowed to graze cattle in the Valles Caldera so long as the Bonds and Dunigans owned it).

218. The New Mexico Lumber and Timber Company began commercial logging operations on Baca Location No. 1 in 1935 in the Valles Caldera's southwest corner. See, e.g., D. Lang, Logging Engineer, U.S. Forest Service, Report on the Baca Location Logging at 1 (dated May, 1936), admitted October 29, 2018, at trial as United States' Ex. DX-BM; Craig Martin, Valle Grande: A History of the Baca Location No. 1 at 85-86 (2003), admitted November 15, 2018, at trial as United States' Ex. DX-JO ("Valle Grande")(discussing Valles Caldera logging operations in the 1930s); Kehoe Report at 26.

219. Loggers resided in cabins on Banco Bonito when the New Mexico Lumber and Timber Company logged the Banco Bonito in the mid-1930s. See, e.g., D.M. Lang, Logging Engineer, U.S. Forest Service, Memorandum for File at 1-2 (dated June 25, 1936), admitted October 29, 2018, at trial as DX-BO; Valle Grande at 85-86; Kehoe Report at 26.

220. John Collier, Commissioner of Indian Affairs in the President Franklin D. Roosevelt administration, criticized the New Mexico Lumber and Timber Company's intensive logging operations and warned of the dire environmental consequences to Pueblos and other communities in the affected watershed. See, e.g., Report on the Baca Location Logging at 1; Collier Warns Jemez Forest Being Ruined, Albuquerque J., June 17, 1936, at 1, 4, admitted October 29, 2018, at trial as United States' Ex. DX-BN; Kehoe Report at 26.

221. By the early 1940s, New Mexico Timber Company, which was the reorganized successor to the New Mexico Lumber and Timber Company, had harvested most of Baca Location No. 1's best timber, and thereafter shifted its logging operations northward into areas along Redondo, Sulphur, and San Antonio Creeks. See, e.g., D. M. Lang, Logging Engineer, U.S. Forest Service, Memorandum at 1 (Aug. 21, 1940), admitted October 29, 2018, at trial as United States' Ex. DX-BR; D. M. Lang, Logging Engineer, U.S. Forest Service, Memorandum (dated Nov. 22, 1940), admitted October 29, 2018, at trial as United States' Ex. DX-BS; Letter from Morton M. Cheney, Acting Regional Forester, U.S. Forest Service, to Forest Supervisor (dated Nov. 28, 1940), admitted October 29, 2018, at trial as United States' Ex. DX-BT.

222. [redacted] See, e.g., High Altitude Adaptations at 111 ("[redacted]"); VCNP Land Use History at 58 [redacted]

[redacted] Kehoe Report at 33.

223. After Frank Bond's death in 1945, his son, Franklin Bond, transitioned Bond ranching operations from the sheep business and the partido system to hired cowboys and cattle grazing. See, e.g., Valle Grande at 67 ("In the 1950s as many as 12,000 head of cattle grazed on the *valles*."); Kehoe Report at 22.

224. During the 1950s, Bond employees patrolled the Valles Caldera to discourage trespassers. See, e.g., Nov. 19 Tr. at 4057:13-20 (Marinelli, Kehoe); Kehoe Report at 23 ("The Bond family was interested not only in controlling the movement of livestock. Bond managers also worked to prevent trespass on Baca Location 1.").

225. In 1955, Bond employees chased a Zia member from Baca Location No. 1 at gunpoint. See, e.g., Florence Hawley Ellis, Religious Freedom of Zia and Jemez Pueblos vs. Use of Geothermal Power from Mt. Redondo at 42 (June 1981), admitted November 29, 2018, at trial as United States' Ex. DX-FC ("Religious Freedom"); Kehoe Report at 34.

226. By 1961, the Bonds had fenced Baca Location No. 1's exterior boundaries, except for small portions along the east and north sides. See, e.g., Letter from George W. Miller, Acting Regional Director, National Park Service, Region Three (Santa Fe), to Director, and attachment: "Preliminary Report: Jemez Crater Area" at 2 (dated Sept. 1961), admitted October 29, 2018, at trial as United States' Ex. DX-CW ("The entire area is fenced and locked against free public access. Hunting and fishing are by permission of the owners only."); Kehoe Report at 23.

227. The December 17, 1962, grazing lease that the Bond family executed with the King Brothers of Stanley, New Mexico, required the lessees "to aid in patrolling against trespass and to keep gates on main roads locked at all times." Grazing Lease at 1 (dated Dec. 17, 1962), admitted October 29, 2018, at trial as United States' Ex. DX-DD; Kehoe Report at 23 (quoting the Grazing Lease).

228. On January 11, 1963, the Bond family sold Baca Location No. 1 to James Patrick Dunigan. See, e.g., Pueblo of Jemez v. United States, Oct. 25 MOO at 11 n.7, 350 F. Supp. 3d at 1062 n.7 (citing Historical Dendroarchaeology at 337); VCNP Land Use History at 43.

229. After Dunigan acquired Baca Location No. 1, his employees installed and repaired fencing along Baca Location No. 1's borders, and these borders remained fenced until the Dunigan family sold the Valles Caldera in 2000. See, e.g., Nov. 19 Tr. at 4170:1-4171:11 (Marinelli, Kehoe); Designation of Deposition Testimony -- Andrew Patrick Dunigan at 36:17-37:1, admitted November 20, 2018, at trial as United States' Ex. DX-JX-8 (Dunigan); id. at 48:17-49:4 (Dunigan); id. at 51:7-21 (Dunigan); Kehoe Report at 48.

230. Dunigan permitted only authorized people on Baca Location 1, and Dunigan employees regularly patrolled the area to secure road gates and to control trespass, particularly during hunting season. See, e.g., Testimony of James P. Dunigan in Baca Land & Cattle Co. v. New Mexico Timber at 414:24-415:13 (dated July 19, 1969), admitted November 16, 2018, at trial as United States' Ex. DX-DS (Dunigan); Letter from George McDonald, General Counsel for Dunigan Enterprises, to M. J. Hassell, Regional Forester, U.S. Forest Service Region 3 at 2 (dated July 20, 1979), admitted November 16, 2018, at trial as United States' Ex. DX-EP; Hunting Agreement between Baca Land and Cattle Company, Inc. and Baca Outfitters, Inc. at 1, 6 (dated

1999), admitted November 20, 2018, at trial as United States' Ex. DX-HP (requiring at least four "full time employees" to patrol the Valles Caldera during elk season); Kehoe Report at 48.

231. In the 1960s, Dunigan began a commercial elk hunting operation on Baca Location No. 1, and the New Mexico Department of Game and Fish controlled the number of elk hunters through permits that it issued to the Dunigan family, which reserved a small number for itself and sold the rest through its guided hunting business. See, e.g., Nov. 16 Tr. at 4045:13-4046:12 (Marinelli, Kehoe); Kehoe Report at 38.

232. The Dunigans strictly prohibited hunting on Baca Location No. 1 without an official permit. See, e.g., Nov. 16 Tr. at 4045:13-4046:12 (Marinelli, Kehoe); Kehoe Report at 38; Designation of Deposition Testimony -- Margaret Loretto at 42:24-43:16, admitted November 20, 2018, at trial as United States' Ex. DX-JX-1 (Loretto)(asserting that Loretto's father's society ceased to hunt in the Valles Caldera in mid-1950s).

233. During the Dunigan ownership, Baca Location No. 1 had a reputation among locals as a dangerous place, because Dunigan's employees would shoot at trespassers. See, e.g., Kehoe Report at 40-41; Religious Freedom at 32.

234. In the early 1960s, New Mexico Timber responded to legislative and market developments by logging intensively areas within Baca Location No. 1 in a practice called clear-cutting, which removed virtually all trees from the targeted areas. See, e.g., VCNP Land Use History at 130-31; Kehoe Report at 35-37.

235. In 1964, Dunigan sued New Mexico Timber in an effort to alter its logging practices. See, e.g., Nov. 16 Tr. at 3998:19-3999:22 (Marinelli, Kehoe); VCNP Land Use History at 130-31; Kehoe Report at 35-37.

236. Between 1963 and 1971, New Mexico Timber built 1,000 miles of road throughout the Valles Caldera, and observers could see the roads "corkscrewing" up the Valles Caldera's mountains and volcanic domes when the United States aquired the Valles Caldera in 2000. E.g. Nov. 16 Tr. at 3859:10-15 (Leonard, deBuys); Valle Grande at 89.

237. In a 1971 letter to Dunigan's Baca Land and Cattle Company, Jemez Pueblo appealed for Redondo Peak logging operations to cease, stating that the Jemez people "do not understand how they came to lose proprietary interest in their ancient shrine, but they realize that you now exercise control over the place under the system of laws now in effect." Letter from David R. Gardner to Baca Land and Cattle Company at 1 (dated Nov. 23, 1971), admitted November 19, 2018, at trial as United States' Ex. DX-DX. See, e.g., Kehoe Report at 45 (discussing the Letter from David R. Gardner to Baca Land and Cattle Company).

238. New Mexico Timber clear-cut Redondo Peak. See, e.g., Kehoe Report at 46 (quoting Dunigan's game manager as stating that "New Mexico Timber 'cut every bit of timber on Redondo Peak'"); Kehoe Rebuttal Report at 11-12.

239. Dunigan purchased Baca Location No. 1's timber rights in 1972 and placed an eight-year moratorium on logging, which resumed in 1980. See, e.g., VCNP Land Use History at 130-31; Kehoe Report at 35-37.

240. The Dunigans logged the Valles Caldera between the 1980s and 2000. See, e.g., U.S. Forest Service, Report on the Study of the Baca Location No. 1 at 30 (1993), admitted October 29, 2018, at trial as United States' Ex. DX-GR; Jeff Balmat and John Kupfer, Assessment of Timber Resources and Logging History of the Valles Caldera National Preserve at 20 (Dec. 28, 2004), admitted November 16, 2018, at trial as United States' Ex. DX-KB.

241. The Dunigan family continued livestock operations on Baca Location No. 1 until they sold the property in 2000, sometimes grazing 7,000 head of cattle annually. See, e.g., Nov. 16 Tr. at 3864:11-3865:6 (Leonard, deBuys)(asserting that the Dunigans shipped 6,000 heifers and steers from Hawaii to the Valles Caldera during their final ownership year); Report on the Study of the Baca Location No. 1 at 23; Grazing Agreement at 2 (dated March 26, 1999), admitted November 20, 2018, at trial as United States' Ex. DX-HT (requiring between 5,000 and 5,500 cattle); Kehoe Report at 35, 37-38.

242. Improvements constructed on Baca Location No. 1 during the Dunigan years included high end guest quarters, movie sets, and a stable for the Dunigan family's racehorses. See, e.g., Kehoe Report at 41; VCNP Land Use History at 114.

243. The Dunigans restricted Jemez Pueblo's access to the Valles Caldera, including for religious activities. See, e.g., Nov. 4 Tr. at 1401:16-18 (Marinelli, Whatley)(affirming that the Dunigans did not open the Valles Caldera to Jemez Pueblo for religious activities); Designation of Deposition Testimony -- Eusebio Toya at 23:8-23 (E. Toya)(affirming that Jemez Pueblo "did not have open access to the Valles Caldera" as of 1969).

244. Dunigan restrictions forced Zia Pueblo [redacted] See, e.g. Nov. 29 Tr. at 4651:6-4653:22 (Marinelli, Anschuetz)([redacted]); Valles Caldera Religious Use at 53 ("[redacted]"); Religious Freedom at 30 ("[redacted]

[redacted] id. at 33 [redacted] .

245. Dunigan restrictions forced Zia Pueblo's [redacted] . See, e.g., Valles Caldera Religious Use at 47-48 ("[redacted], at night. . . . . Periods of bright moonlight are avoided and no flashlights are used for fear of detection."); Religious Freedom at 34 ("Periods of bright moonlight are avoided, and no flash lights are used. The fear, of course, is detection.").

246. The members of Zia Pueblo's religious societies regularly trespassed throughout Baca Location No. 1 during the Dunigan ownership period, typically at night. See, e.g., Religious Freedom at 35 ("[T]he religious society members have to sneak into the area and must hide while there because of the fences, guards, and No Trespassing signs."); [redacted] Jemez v. DOE, Summary Judgment Motion at 47 ("The visits of the Zia religious societies, either by groups or their officer representatives, continue, usually on foot, by night, and with great care to hide in restricted areas.").

247. The Dunigans granted Jemez Pueblo permission to visit cultural and religious sites within the Valles Caldera on an ad hoc basis. See, e.g., Designation of Deposition Testimony -- Andrew Patrick Dunigan at 31:14-15 (Dunigan)("It was my understanding that

[Jemez Pueblo] did have to ask permission to gain access to Redondo Peak."); id. at 36:13-16 ("[I]f [Jemez Pueblo members] were visiting the ranch without having sought and been given permission, then we would deem that a trespass or unauthorized entry to the ranch."); id. at 42:6-43:4 (Marinelli, Dunigan)(asserting that the Dunigans allowed Jemez Pueblo members access to the Valles Caldera "for religious or ceremonial, cultural purposes," but not for hunting, farming, grazing livestock, or harvesting timber); id. at 45:6-24 (Marinelli, Dunigan)(asserting that, "[o]n at least one occasion," the Dunigans denied Jemez Pueblo access to the Valles Caldera over safety concerns related either to third-party cattle shipping, or to game hunting activities).

248. In response to the Dunigan's restrictions on Jemez Pueblo's Valles Caldera use, Jemez Pueblo sought in 1998 a Congressional Tribal trust transfer of a 200-acre parcel on Redondo Peak. See, e.g., Nov. 4 Tr. at 1405:19-24 (Whatley); id. at 1406:21-24 (Whatley); Designation of Deposition Testimony -- Eusebio Toya at 23:8-23 (E. Toya); id. at 41:11-18 (E. Toya)(asserting that, under the Dunigans, the Valles Caldera "became private land where they didn't open the land").

249. In 2000, the Dunigans secured water rights in the Rio Jemez watershed based on their claimed water use within the Valles Caldera, and, although Jemez Pueblo was a party to the litigation, Jemez Pueblo did not similarly seek water rights based on historic or then-present Valles Caldera water use. See, e.g., Nov. 19 Tr. at 4273:24-4275:16 (Marinelli, Yepa)(affirming that Jemez Pueblo's claims in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman do not involve water use within the Valles Caldera's boundaries); see No. CIV 83-1041 JEC\ACE, Partial Final Judgement and Decree on Non-Pueblo, Non-Federal Proprietary Water Rights and Addendum at 12-14, 16-18 (D.N.M. Dec. 1, 2000)(Conway, J.), admitted November 19, 2018, at

trial as United States' Ex. DX-IJ (identifying water rights within Baca Location No. 1, which the Dunigans possessed in 2000); United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CIV 83-1041 SC\ACE, Report of the Special Master at 5 (D.N.M. Oct. 1, 1991)(Campos, J.), admitted October 29, 2018, at trial as United States' Ex. DX-GL ("The determinations in this report are upon the claims asserted by the United States for the Pueblos, and by the Pueblos for themselves, to water rights based upon the Pueblos' present and past uses of water."); United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CIV 83-1041 MV\ACE, Jemez Opening Brief Submitted by the Pueblo of Jemez at 5 (D.N.M. May 3, 2004)(Vázquez, J.), admitted Nov. 19, 2018, at trial as United States' Ex. DX-JY (specifying Jemez Pueblo's past and present water use); United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, Opening Br. of Pueblos of Santa Ana, Zia, and Jemez and the United States, On Issues 1 and 2, No. CV 83-1041 MV/WPL at 4-7 (dated Aug. 19, 2014), admitted October 29, 2018, at trial as United States' Ex. DX-NY ("Numerous modern decisions have recognized that a tribe's long, uninterrupted (occupation of land gives rise to an aboriginal water right.").

250. Private owners prohibited Jemez Pueblo's unrestricted Valles Caldera use during the twentieth century.[101] See, e.g., Nov. 5 Tr. at 1537:9-20 (Chinana); id. at 1540:23-1541:18

[101]The United States asks the Court to find that Jemez Pueblo "members were generally prohibited from accessing the Preserve lands during the 20th century." United States' Proposed Findings ¶ 221, at 60 (citing Nov. 5 Tr. at 1537:9-20 (Chinana); id. at 1540:23-1541:18 (Chinana); id. at 1542:6-24 (Chinana); id. at 1580:11-1581:20 (Chinana); Nov. 9 Tr. at 2585:1-7 (Madalena); Nov. 15 Tr. at 3730:15-3731:9 (C. Toya); Nov. 20 Tr. at 4359:3-4360:19 (V. Gachupin); id. at 4366:14-4367:6 (V. Gachupin); id. at 4361:6-17 (Gachupin); id. at 4362:20-4363:12 (V. Gachupin); id. at 4364:11-4365:7 (V. Gachupin); Designation of Deposition Testimony -- Eusebio Toya at 7:10-21 (E. Toya); id. at 8:17-9:10 (E. Toya); id. at 10:23-11:2 (E. Toya); id. at 61:7-12 (E. Toya); Kehoe Rebuttal Report at 17). The record indicates, however, that the private owners restricted Jemez Pueblo's Valles Caldera use for certain activities, such as hunting, farming, and

(Chinana); id. at 1542:6-24 (Chinana); id. at 1580:11-1581:20 (Chinana); Nov. 9 Tr. at 2585:1-7 (Madalena); Nov. 15 Tr. at 3730:15-3731:9 (C. Toya); Trial Transcript at 4359:3-4360:19 (taken Nov. 20, 2018), filed February 12, 2019 (Doc. 360)("Nov. 20 Tr.")(V. Gachupin); id. at 4366:14-4367:6 (V. Gachupin); id. at 4361:6-17 (V. Gachupin); id. at 4362:20-4363:12 (V. Gachupin); id. at 4364:11-4365:7 (V. Gachupin); Kehoe Rebuttal Report at 17.

7. Jemez Pueblo's Religious Societies Rarely Accessed the Valles Caldera During the Twentieth Century.

251. [redacted] See, e.g., Oct. 31 Tr. at 791:8-794:24 (Marinelli, Shendo)([redacted]); Nov. 5 Tr. at 1481:6-1482:13 (Johnson, Chinana)([redacted]); Nov. 5

grazing, but generally permitted others, such as religious pilgrimages to various sacred sites, including to Redondo Peak. See, e.g., Nov. 5 Tr. at 1537:9-20 (Chinana)(affirming that, before 2000, the Valles Caldera's private owners did not permit Jemez Pueblo "to use the Valles Caldera in the way it wanted" and that Jemez Pueblo's Valles Caldera use was "minimal" in 1995); Nov. 9 Tr. at 2585:1-7 (Madalena)(affirming that private owners did not permit Jemez Pueblo to hunt in the Valles Caldea); Designation of Deposition Testimony -- Andrew Patrick Dunigan at 31:14-15 (Dunigan)("It was my understanding that [Jemez Pueblo] did have to ask permission to gain access to Redondo Peak."); id. at 36:13-16 ("[I]f [Jemez Pueblo members] were visiting the ranch without having sought and been given permission, then we would deem that a trespass or unauthorized entry to the ranch."); id. at 42:6-43:4 (Marinelli, Dunigan)(asserting that the Dunigans allowed Jemez Pueblo members access to the Valles Caldera "for religious or ceremonial, cultural purposes," but not for hunting, farming, grazing livestock, or harvesting timber); id. at 45:6-24 (Marinelli, Dunigan)(asserting that, "[o]n at least one occasion," the Dunigans denied Jemez Pueblo access to the Valles Caldera over safety concerns related either to third-party cattle shipping or game hunting activities). The Court will not adopt, therefore, the proposed fact.

Tr. at 1489:16-19 (Johnson, Chinana)([redacted]).

252. The Valles Caldera's private owners restricted Jemez Pueblo's [redacted] See, e.g., Nov. 5 Tr. at 1557:7-1558:12 (Marinelli, Chinana); Trial Transcript at 4359:3-4360:19 (taken Nov. 20, 2018), filed February 12, 2019 (Doc. 360)("Nov. 20 Tr.")(Marinelli, V. Gachupin)([redacted]).

253. [redacted] See, e.g., Designation of Deposition Testimony -- Joseph Toya at 71:9-72:1, admitted November 20, 2018, at trial as United States' Ex. DX-JX-3 (J. Toya)[redacted]; id. at 91:17-92:25 (J. Toya)([redacted]); id. at 112:8-14 (J. Toya)("[redacted]").

254. [redacted] See, e.g., Nov. 5 Tr. at 1732:7-1734:14 (Marinelli, V. Gachupin)([redacted]); Kehoe Rebuttal Report at 17 [redacted].

255. [redacted] See, e.g., Nov. 5 Tr. at 1673:22 -1674:7 (Marinelli, A. [redacted]

[redacted]; Kehoe Rebuttal Report at 17 [redacted].

256. The Valles Caldera's private owners did not permit Jemez Pueblo's [redacted] See, e.g., Nov. 1 Tr. at 1007:12-17 (Brar, Loretto); id. at 1012:11-1013:4 (Brar, Loretto)([redacted]); Kehoe Report at 17 [redacted].

257. The Valles Caldera's private owners did not permit Jemez Pueblo's [redacted]. See, e.g., Nov. 9 Tr. at 2580:17-2581:3 (Marinelli, Madalena)([redacted]); id. at 2583:11-2584:2 (Marinelli, Madalena)([redacted]).

258. The Valles Caldera's private owners restricted Jemez Pueblo's [redacted] See, e.g., Nov. 9 Tr. at 2853:22-2855:7 (Marinelli, J. Gachupin)([redacted]) id. at 2852:5-17

(Leonard, J. Gachupin)( ).

259. The Valles Caldera's private owners prohibited Jemez Pueblo's See, e.g., Nov. 5 Tr. at 1544:4-7 (Chinana)( ); Nov. 6 Tr. at 1908:9-1911:10 (Marinelli, Ferguson)(; Nov. 15 Tr. at 3502:21-3504:10 (Leonard, García y Griego)( ); Nov. 16 Tr. at 3907:5-3910:22 (Leonard, deBuys)( ); Kehoe Rebuttal Report at 17 ; Ferguson Report at 71 ( ); id. at 105 .

260. The Valles Caldera's private owners restricted Jemez Pueblo's See, e.g., Nov. 15 Tr. at 3505:2-

3507:18 (Leonard, García y Griego)([redacted]; Kehoe Rebuttal Report at 17 [redacted].

8. Jemez Pueblo Jointly Used Portions of the Valles Caldera with Other Pueblos Though at Least the 1950s.

261. In 1946, Congress enacted the Indian Claims Commission Act, 60 Stat. 1049 ("ICCA"), to "dispose of the Indian claims problem with finality" and to "transfer from Congress to the Indian Claims Commission the responsibility for determining the merits of native American claims."[102] United States v. Dann, 470 U.S. 39, 45 (1985). See, e.g., Nov. 19 Tr. at 4062:2-4063:16 (Marinelli, Kehoe); Kehoe Report at 28.

262. The ICCA required Pueblos and Tribes to base their land claims on a given area's exclusive use and occupancy in 1848, when the United States assumed political sovereignty over the Southwest. See, e.g., ICCA § 2, 60 Stat. 1049; VCNP Land Use History at 6.

263. The ICCA includes a statute of limitations under which American Indians would relinquish any pre-August 13, 1946, claims against the United States not brought before August

[102]The current United States Code omits the ICCA, because the Indian Claims Commission terminated on September 30, 1978. See Pueblo of Jemez v. United States, 790 F.3d at 1147 n.3.

13, 1951.[103] See, e.g., ICCA §§ 2, 12, 60 Stat. 1049; Pueblo of Jemez v. United States, 790 F.3d at 1147 n.13.

264. Payment on a claim under the ICCA bars suit against the United States for any claims "touching on any of the matters" presented before the ICC. ICCA § 22(a), 60 Stat. 1049 ("[P]ayment of any claim, after a determination under the Act, shall be a full discharge of the United States of all claims and demands touching any of the matters involved in the controversy."). See Pueblo of Jemez v. United States, 790 F.3d at 1170 (quoting ICCA § 22(a), 60 Stat. 1049).

265. If Jemez Pueblo believed before August 13, 1951, that the United States had extinguished its aboriginal title to the Valles Caldera, Jemez Pueblo could have litigated its Valles Caldera claim before the Indian Claims Commission ("ICC").[104] See, e.g., ICCA § 2, 60 Stat. 1049; United States v. Dann, 470 U.S. at 45.

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[103]Section 12 of the ICCA provides: "[N]o claim existing before such date but not presented within such period may thereafter be submitted to any court or administrative agency for consideration, nor will such claim thereafter be entertained by the Congress." ICCA § 12, 60 Stat. 1049. See Pueblo of Jemez v. United States, 790 F.3d at 1147 n.13 (quoting ICCA § 12, 60 Stat. 1049).

[104]The United States asks the Court to find that, if Jemez Pueblo "believed at that time that it had retained aboriginal title to the Valles Caldera[,] the ICC Act provided an opportunity to litigate that claim. But it did not; instead Plaintiff (and other Pueblos) pressed land claims before the ICC that were inconsistent with the claims Plaintiff presses in this case." United States' Proposed Findings ¶ 119, at 32. The record does not support the proposed fact. Jemez Pueblo insists, for example, that it maintained its aboriginal title throughout the twentieth century and, therefore, did not have a claim against the United States in 1946, see Pueblo of Jemez v. United States, No. CIV 12-0800 RB/RHS, 2013 WL 11325229, at *4 (D.N.M. Sept. 24, 2013)(Brack, J.), rev'd and remanded, 790 F.3d 1143 (10th Cir. 2015), and the Tenth Circuit affirmed this theory of the case as Jemez Pueblo's theory when it concluded that, because

> there is no evidence the Pueblo had a claim against the United States prior to 1946 with respect to the land involved in this action, we disagree with the government that the Jemez Pueblo could have brought its current claims before the ICC in the

266. On July 9, 1951, within the ICCA's prescribed five-year limitations period, Jemez, Zia, and Santa Ana Pueblos filed a joint petition with the ICC. See, e.g., Amended Petition -- Indian Claims Commission Docket No. 137, Pueblo de Zia, Pueblo de Jemez and Pueblo de Santa Ana v. United States (March 17, 1952), admitted October 29, 2018, at trial as United States' Ex. DX-CD ("Am. Pet. -- ICC Docket No. 137"); Pueblo of Zia, et al v. United States, 11 Ind. Cl. Comm. 131 (1962)("Zia I").

267. In Jemez Pueblo's ICC litigation, Zia, Jemez, and Santa Ana Pueblos alleged that, in 1848, they held aboriginal title to approximately 520,000 acres in Sandoval County, New Mexico, and that the United States thereafter extinguished their aboriginal title, because the United States permitted other, non-Indian persons to claim and possess those same lands. See Am. Pet. -- ICC Docket No. 137 at 2-3, 24-25 (alleging that the "three Pueblos . . . have a common interest" in 520,000 acres of land in northern New Mexico); See United States v. Pueblo De Zia, 474 F.2d 639, 641 (Ct. Cl. 1973)("Zia IV").

268. Although Baca Location No. 1 was not the subject of Jemez Pueblo's ICC litigation, Zia, Jemez, and Santa Ana Pueblos jointly surveyed and presented land-use evidence involving three areas, including one area that encompasses a portion of Baca Location No. 1. See, e.g., Nov. 19 Tr. at 4064:10-4067:25 (Marinelli, Kehoe); ICC Docket 137 -- Petitioner's Proposed Findings

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> prior litigation. The government's res judicata argument fails because the Jemez Pueblo's current claim is a quiet title action to establish that its aboriginal title to different land has not been extinguished.

Pueblo of Jemez v. United States, 790 F.3d at 1171. Accordingly, the Court concludes that Jemez Pueblo's claim in this case is not inconsistent with its ICC claim, and the Court declines to adopt the proposed fact.

of Fact at 9 (June 3, 1957), admitted October 29, 2018, at trial as United States' Ex. DX-CM; Map, Petitioner's Ex. 14, ICC Docket. 137 at 1 (dated Dec. 10, 1051), admitted October 29, 2018, at trial as United States' Ex. DX-CC.

269. Zia, Jemez, and Santa Ana Pueblos' 1951 ICC claim-area map encompasses 957,440 acres, including Valles Caldera portions. See, e.g., Nov. 19 Tr. at 4065:24-4066:1 (Marinelli, Kehoe); Map, Petitioner's Ex. 14, ICC Docket 137 at 1.

270. In 1957, Zia, Jemez, and Santa Ana Pueblos stated that they were presenting Area No. 3 use evidence, which includes Valles Caldera portions, "for the purpose of showing total land used by claimants." Nov. 19 Tr. at 4064:10-4067:25 (Marinelli, Kehoe)(quoting Proposed Findings of Fact, ICC Docket 137); Petitioner's Proposed Findings of Fact, ICC Docket 137 at 9.

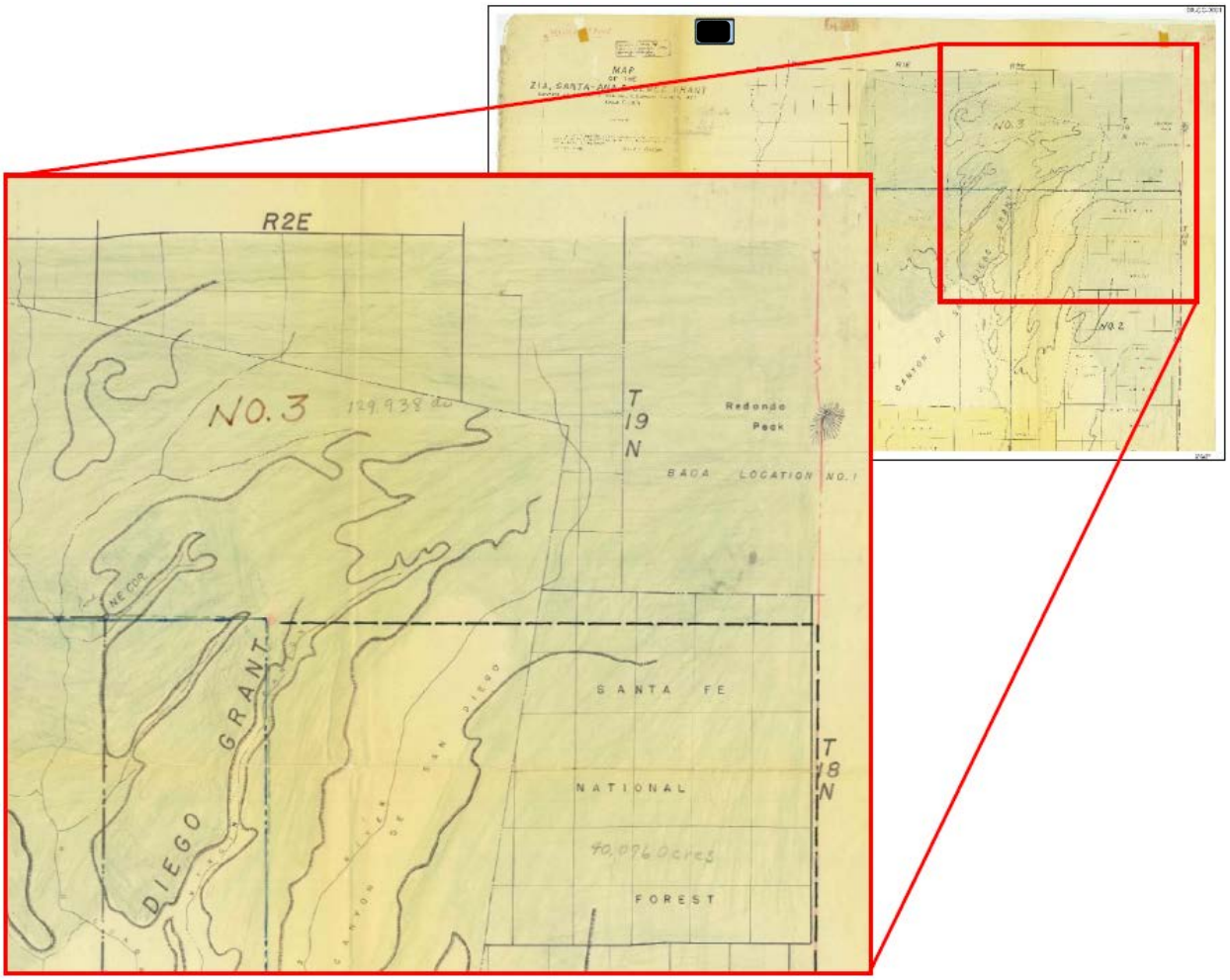

Figure 8. Detail of the Pueblos of Jemez, Santa Ana, and Zia's Claimed Joint Use Areas

271. The Pueblos of Jemez, Santa Ana, and Zia jointly used shrines and other areas in Baca Location No. 1. See, e.g., Pueblos of Zia, Jemez, and Santa Ana v. U.S., Indian Claims Commission, Docket No. 137, Transcript of Testimony at 49-53, 59-60 (Dec. 5, 1956), admitted October 29, 2018, at trial as United States' Ex. DX-CK (Mann, P. Toya, O'Marr)("ICC Tr.").

272. Redondo Peak is sacred to Zia, Jemez, and Santa Ana Pueblos. See, e.g., ICC Tr. at 51 (Mann, P. Toya); Kehoe Report at 29-30 ([redacted]

[redacted]

273. Through at least the 1950s, the Pueblos of Jemez, Santa Ana and Zia shared [redacted] northeast of Redondo Peak. See, e.g., ICC Tr. at 59-60 (Mann, P. Toya)[redacted]; Kehoe Report at 29-30.

274. Through at least the 1950s, the Pueblos of Jemez, Santa Ana and Zia shared [redacted]. See, e.g., ICC Tr. at 52 (Mann, Toya)([redacted]); Kehoe Report at 29-30.

275. Through at least the 1950s, Santa Clara Pueblo and San Ildefonso Pueblo [redacted] See, e.g., ICC Tr. at 84-85 (Rochow, P. Toya); Kehoe Report at 30 [redacted]

276. Through at least the 1950s, Santa Clara, San Ildefonso, Zia, Santa Ana, and Jemez Pueblos [redacted] See, e.g., Nov. 15 Tr. at 3746:3-19 (C. Toya)([redacted]); ICC Tr. at 84-85 (Rochow, P. Toya); Kehoe Report at 30.

277. Through at least the 1950s, the Pueblos of Jemez, Santa Ana and Zia shared equally the lands discussed before the ICC, which include Valles Caldera segments. See, e.g., Nov. 19 Tr. at 4073:1-4074:1 (Marinelli, Kehoe)(quoting Toya as affirming that Toya's tradition taught him

that Jemez, Zia, and Santa Ana Pueblos used the claim area "'as a unit,'" and that they "'have commonly worked together many, many years, centuries, centuries ago.'" (quoting ICC Tr. at 85 (P. Toya))); ICC Tr. at 85 (P. Toya); Kehoe Report at 29-30.

278. Through at least the 1950s, at least one Zia Pueblo religious society visited [redacted] See, e.g., Nov. 19 Tr. at 4075:2-22 (Marinelli, Kehoe); ICC Tr. at 203-04 (Mann, Medina).

279. Jemez Pueblo's Exhibit No. 18 for its ICC litigation, entitled Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana, depicts several historical and religious sites associated with Zia, Jemez, and Santa Ana Pueblos after 1700, including Redondo Peak, which Jemez Pueblo designated as a religious site for both Jemez Pueblo and Zia Pueblo, and labeled with each Pueblo's respective name for the mountain.[105] See, e.g., Oct. 31 Tr. at 622:24-623:6 (Marinelli, Liebmann); Nov. 19 Tr. at 4068:1-20 (Marinelli, Kehoe); ICC Docket 137, Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana (Jemez Pueblo's ICC Ex. No. 18) at 1.

280. Jemez Pueblo's ICC litigation's settlement provides that entry of final judgment "shall finally dispose of all rights, claims or demands which plaintiffs . . . have asserted or could have asserted, with respect to the subject matters of such case,"[106] and bars Jemez Pueblo from

[105]Ellis helped to prepare Sites Supporting the Land Claim of the Pueblos of Zia, Jemez, and Santa Ana, and served as an expert witness for Jemez Pueblo before the ICC. See, e.g., ICC Tr. at 258; Kehoe Report at 30 ("Anthropologist Florence Hawley Ellis testified as an expert witness for Jemez, Santa Ana, and Zia at these 1956 ICC proceedings.").

[106]The ICC initially concluded that the Pueblos had failed to establish any aboriginal title to the claimed lands. See Zia IV, 474 F.2d at 641. The ICC concluded that the claimed lands were "all held valid and patented by the United States[;] they were private property as of the time of the

"asserting any such rights, claims, or demands against defendant in any other or future action."[107] Pueblo de Zia, Pueblo de Jemez, and Pueblo de Santa Ana v. United States of America -- Docket No. 137, Stipulation of Settlement at 1, 2, 4, 6 (Dec. 21, 1973), admitted October 29, 2018, at trial

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Treaty of Guadalupe Hidalgo. Therefore, [the Pueblos'] claim of aboriginal title to these areas must be rejected." Pueblo De Zia v. United States, 165 Ct. Cl. 501, 503 (1964)("Zia II"). Regarding the Pueblos' claimed public domain lands, the ICC ruled that "the evidence offered is so vague and indefinite that a finding of aboriginal title in the [Pueblos] to any of the claimed area would have to be based on mere conjecture." Zia II, 165 Ct. Cl. at 503. The ICC concluded that the evidence did not establish "the extent of [Jemez, Zia, and Santa Ana Pueblos'] exclusive use and occupancy of the claimed area as of the critical date." Zia II, 165 Ct. Cl. at 507.

On appeal, the Pueblos "concede[d] the correctness of the Commission's determination that they had no aboriginal claim to the Spanish grants which encroach on the claimed area." Zia II, 165 Ct. Cl. at 503. Nonetheless, the Pueblos contended that they had established that they had, at one time, held aboriginal title to the 298,634 acres that had entered the public domain. See Zia II, 165 Ct. Cl. at 507-08. The Court of Claims agreed, concluding that the Pueblos had established aboriginal title to those lands. See Zia II, 165 Ct. Cl. at 508-09. The Court of Claims remanded the case to the ICC. See Zia II, 165 Ct. Cl. at 509.

On remand, the Pueblos argued that the United States had extinguished the Pueblos' aboriginal title by including some of the lands within the Jemez National Forest Reserve and by including the remaining lands within the boundaries of a grazing district established pursuant to the Taylor Grazing Act of 1934, 43 U.S.C. §§ 315-315r ("Taylor Grazing Act"). See Pueblo de Zia v. United States, 19 Ind. Cl. Comm. 56, 68 (1968)("Zia III"). The ICC ultimately agreed that the United States had extinguished aboriginal title through those actions. See Zia III, 19 Ind. Cl. Comm. at 74-76. Additionally, the ICC found that the United States had previously extinguished title to many thousands of acres of land when it patented those lands to private parties under the homestead acts. See Zia III, 19 Ind. Cl. Comm. at 77. On appeal, Jemez Pueblo conceded and the Court of Claims affirmed the ICC's conclusions. See Zia IV, 474 F.2d at 641-42 n.4.

[107]Jemez Pueblo asks the Court to find that "[t]he ICC and Court of Claims cases where both parties effectively stipulated to the United States taking of aboriginal title do not provide sufficient precedential value to control this case." Jemez Pueblo's Proposed Findings ¶ 726, at 221. Although the Court agrees with Jemez Pueblo that Jemez Pueblo's ICC settlement does not bind the Court regarding whether Jemez Pueblo may litigate its Valles Caldera claim, see Pueblo of Jemez v. United States, Oct. 25 MOO at 119 n.39, 350 F. Supp. 3d at 1119 n.39, the Court nonetheless finds persuasive Jemez Pueblo's position before the ICC regarding Zia, Jemez, and Santa Ana Pueblos shared Valles Caldera ownership and use.

as United States' Ex. DX-EB; Pueblo of Jemez v. United States, Oct. 25 MOO at 10, Jemez Pueblo v. United States, 350 F. Supp. 3d at 1062-63.

281. The Pueblos of Jemez, Santa Ana, and Zia chose not to claim the Valles Caldera in their joint ICC claim, because they recognized that many Pueblos used the Valles Caldera. See, e.g., Religious Freedom at 21 ("[W]ith some knowledge of other Rio Grande pueblos similarly considering the Valles caldera [sic] area sacred and of ritual use, it was impossible to put it into a claim depending on sole and exclusive use of lands."[108]); Kehoe Report at 31.

[108]The United States asks the Court to find:

> The statement by Ellis, who served as an expert for all three Plaintiffs in ICC Docket 137, makes clear that Jemez was aware at the time it pursued its ICC claims that it: 1) had never possessed aboriginal title to the Valles Caldera lands because they functioned as a commons; and 2) that if Jemez (or Jemez, Zia, and Santa Ana) ever held any property interest to any portion of the Caldera, that they lost that interest prior to filing their ICC claim.

United States' Proposed Findings ¶ 155, at 40 (citing Nov. 19 Tr. at 4235:9-19 (D. Yepa)(acknowledging Jemez Pueblo's March 10, 2000 congressional testimony as Jemez Pueblo's historical chronology); Religious Freedom at 21; Testimony of the Pueblo of Jemez Before the Senate Committee on Energy and Natural Resources; Subcommittee on Forests and Public Land Management at 7 (March 10, 2000), admitted October 29, 2018, at trial as United States' Ex. DX-IE (asserting that Jemez Pueblo believed that the 1766 Ojo del Espiritu Santo Grant that was its ICC litigation's subject)). The record does not support the proposed fact. Jemez Pueblo insists, for example, that it maintained its aboriginal title throughout the twentieth century and, therefore, did not have a claim to present before the ICC in 1946, see Pueblo of Jemez v. United States, No. CIV 12-0800 RB/RHS, 2013 WL 11325229, at *4 (D.N.M. Sept. 24, 2013)(Brack, J.), and the Tenth Circuit affirmed this theory of the case as Jemez Pueblo's theory when it concluded that, because

> there is no evidence the Pueblo had a claim against the United States prior to 1946 with respect to the land involved in this action, we disagree with the government that the Jemez Pueblo could have brought its current claims before the ICC in the prior litigation. The government's res judicata argument fails because the Jemez

9. Several Pueblos and Tribes Claimed Ownership to Areas Within the Valles Caldera During the 1950s.

282. On August 11, 1951, Santa Clara Pueblo filed an ICC land claim petition that includes lands which extend into Baca Location No. 1's northeastern section.[109] See, e.g., Pueblo

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> Pueblo's current claim is a quiet title action to establish that its aboriginal title to different land has not been extinguished,

Pueblo of Jemez v. United States, 790 F.3d at 1171. Moreover, the Court agrees with Jemez Pueblo that Jemez Pueblo's ICC settlement does not bind the Court regarding whether Jemez Pueblo may litigate its Valles Caldera claim. See Pueblo of Jemez v. United States, Oct. 25 MOO at 119 n.39, 350 F. Supp. 3d at 1119 n.39. Accordingly, the Court concludes that Jemez Pueblo's claim in this case is not inconsistent with its ICC claim, and the Court declines to adopt the proposed fact.

[109]Jemez Pueblo asks the Court to find that, "[p]rior to this litigation, the Pueblo of Santa Clara repeatedly indicated that its boundaries do not encompass the Claim Area, but rather only include a small portion of the Valles Caldera that forms the Santa Clara Creek Canyon," based, in part, on Jemez Pueblo's understanding that,

> [d]uring the 1950s ICC litigation, Santa Clara members described their western boundaries as the mountain divide where the Santa Clara Creek starts to run east. . . . The Court of Private Land Claims confirmed a grant of land to the Pueblo of Santa Clara consisting of less than 500 acres, known as the Shoestring Grant. The Shoestring Grant is considerably east and outside of the Claim Area.

Jemez Pueblo's Proposed Findings ¶ 601, at 189-90 (citing Santa Clara Pueblo Letter to Andy Dunigan re: Claims to Baca Location No. 1 (dated Sept. 26, 1997), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 005; History of the Boundary Between the Baca Location No. 1 Grant and Santa Clara Pueblo (dated June 3, 1998), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 172; Map of Santa Clara Aboriginal Claimed Area, ICC Doc. 356, at 1 (undated), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 176; Stipulation for Entry of Final Judgment, Santa Clara, Dkt. 356 (undated), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 177; Pueblo of Santa Clara v. U.S. Testimony (dated 1954), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 250). Although the Court agrees with Jemez Pueblo that the cited support indicates that Santa Clara Pueblo's boundaries do not encompass the entire Valles Caldera, the evidence demonstrates that Santa Clara Pueblo believes that its boundaries extend well into those lands. See, e.g., Santa Clara Pueblo Letter to Andy Dunigan re: Claims to Baca Location No. 1 (claiming aboriginal lands totaling almost 10,000 acres within Baca Location No. 1); Map of Santa Clara Aboriginal Claimed Area, ICC Doc. 356 (depicting a claim area that extends significantly into Baca Location No. 1). The Court, therefore, will not adopt the proposed fact.

of Santa Clara v. United States, Docket No. 356, Petition at 4-5 (dated Aug. 11, 1951), admitted October 29, 2018, at trial as United States' Ex. DX-CA; Pueblo of Santa Clara v. United States, Docket 356, Map of Santa Clara Pueblo's Aboriginal Lands Claim prepared by the Bureau of Land Management at 1 (dated July, 1967), admitted October 29, 2018, at trial as United States' Ex. DX-DO; Kehoe Report at 31.

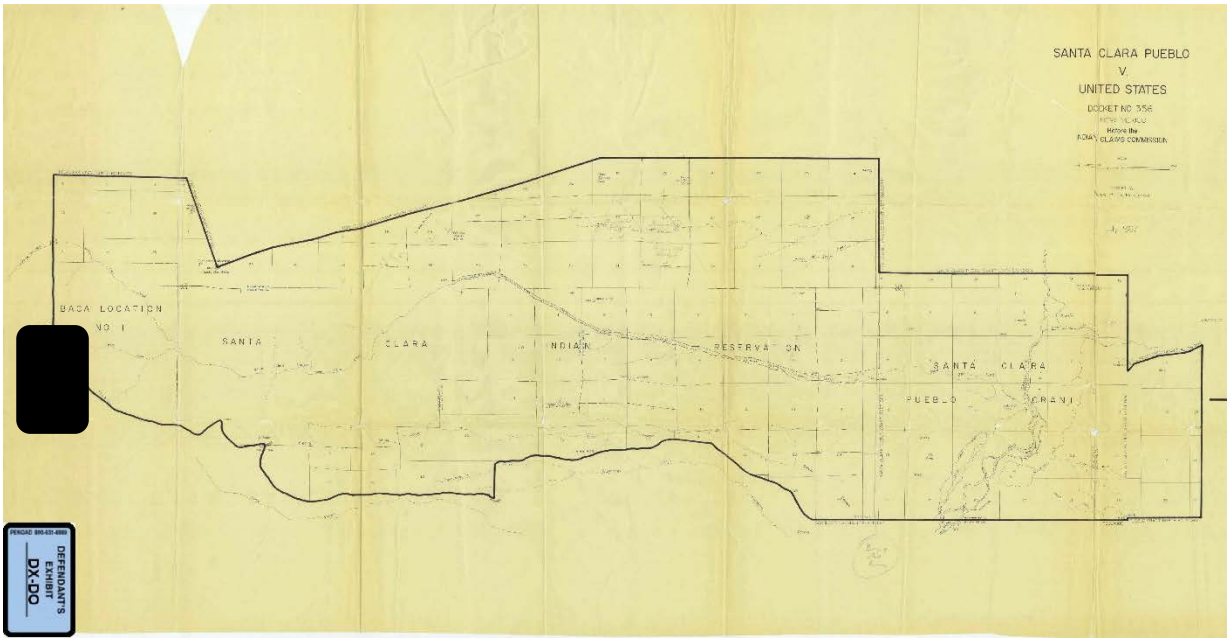

Figure 9. Map of Santa Clara Pueblo's Aboriginal Lands Claim Area

283. Santa Clara members historically passed through Baca Location No. 1 while traveling to and beyond Santa Clara Creek's headwaters for grazing, hunting, religious, and other purposes. See, e.g., Testimony of Pasqual Tafoya and Jose Narango at 15-18, 24-25, 37-47, Pueblo of Santa Clara v. United States, ICC Docket No. 356 (dated Sept. 7, 1954), admitted October 29, 2018, at trial as United States' Ex. DX-CI (Tafoya); Ferguson Report at 125 (noting that Santa

Clara Pueblo and other Pueblos used a route through the Valles Caldera's northeast portion "to travel into Obsidian Valley" abutting Cerro del Medio); id. at 76 ("People from Santa Clara Pueblo used the northeastern portion of the Valles Caldera to graze livestock."); id. at 88 ("Santa Clara Pueblo and other Pueblo communities collected obsidian in the Valles Caldera.").

284. On August 11, 1951, San Ildelfonso Pueblo filed an ICC land claim petition that identified the Valle Grande as its aboriginal territory's western boundary. See, e.g., Nov. 19 Tr. at 4082:18-4083:22 (Marinelli, Kehoe)("This came in the context of a discussion about the traditional aboriginal lands of San Ildefonso Pueblo, and the questioner asked Mr. Aguilar: 'And what is the boundary on the west side?' He answered: 'The west side is the Baca location and the Valle Grande.'" (quoting Testimony of Joe Aguilar and Abel Sanchez, Pueblo of San Ildefonso, Docket No. 354 at 12 (dated Dec. 12, 1956), admitted October 29, 2018, at trial as United States' Ex. DX-CL (Aguilar))); Pueblo of San Ildefonso, Docket No. 354, Testimony of Joe Aguilar and Abel Sanchez at 12, 36-37, 39-47, 54-56 (Aguilar); Kehoe Report at 31-32.

285. On January 9, 1958, the Jicarilla Apache Tribe filed an ICC land claim that included the entire Valles Caldera.[110] See, e.g., Nov. 19 Tr. at 4085:2-4087:12 (Marinelli,

[110]Jemez Pueblo asks the Court to find: "The Jicarilla Apache Nation does not recognize nor identify the Claim Area as its aboriginal territory, despite the outline of the Baca Location No.1 appearing to be included in the extreme fringe of the ICC map." Jemez Pueblo's Proposed Findings ¶ 648, at 203 (citing Liebmann et. al. Rebuttal Reports at 54; Jicarilla Apache Tribe v. United States, ICC Docket No. 22A, Petitioner's Exhibit M, Jicarilla Apache Map Alleging Aboriginal Title to Entire Valles Caldera at 1 (dated 1958), admitted October 29, 2018, at trial as United States' Ex. DX-CO). The record, however, establishes that, although the Jicarilla Apache Nation is not presently claiming the Valles Caldera as its aboriginal territory, it nonetheless included the Valles Caldera within its aboriginal territory at late as 1958. See, e.g., Jicarilla Apache Tribe v. United States, ICC Docket No. 22A, Petitioner's Exhibit M, Jicarilla Apache Map Alleging Aboriginal Title to Entire Valles Caldera at 1 (depicting an area that encompasses the entire Valles Caldera); Amended Petition, Jicarilla Apache Tribe v. United States, ICC Docket No. 22A at 1, 3 (dated Jan. 9, 1958), admitted

Kehoe)(describing a Jicarilla Apache map that "shows pretty clearly that the entirety of Baca Location 1 was included in Jicarilla's claim"); Jicarilla Apache Tribe v. United States, ICC Docket No. 22A, Amended Petition at 1, 3 (dated Jan. 9, 1958), admitted October 29, 2018, at trial as United States' Ex. DX-CP)(asserting that Jicarilla Apache had aboriginal title to an area running southwesterly to the northwest corner "of Santa Clara Pueblo Grant; thence following the west line of the Santa Clara and San Ildefonso Pueblo Grants to the north line of the Cochiti grant; thence west following the north line of Cochiti and Jemez Pueblo Grants to the crest of the Nacimiento Mountains"); Jicarilla Apache Tribe v. United States, ICC Docket No. 22A, Petitioner's Exhibit M, Jicarilla Apache Map Alleging Aboriginal Title to Entire Valles Caldera at 1 (dated 1958), admitted October 29, 2018, at trial as United States' Ex. DX-CO (depicting an area that encompasses the entire Valles Caldera).

October 29, 2018, at trial as United States' Ex. DX-CP (claiming that the Jicarilla Apache Nation had aboriginal title to an area running "southwesterly to the northwest corner of Santa Clara Pueblo Grant; thence following the west line of the Santa Clara and San Ildefonso Pueblo Grants to the north line of the Cochiti grant; thence west following the north line of Cochiti and Jemez Pueblo Grants to the crest of the Nacimiento Mountains").

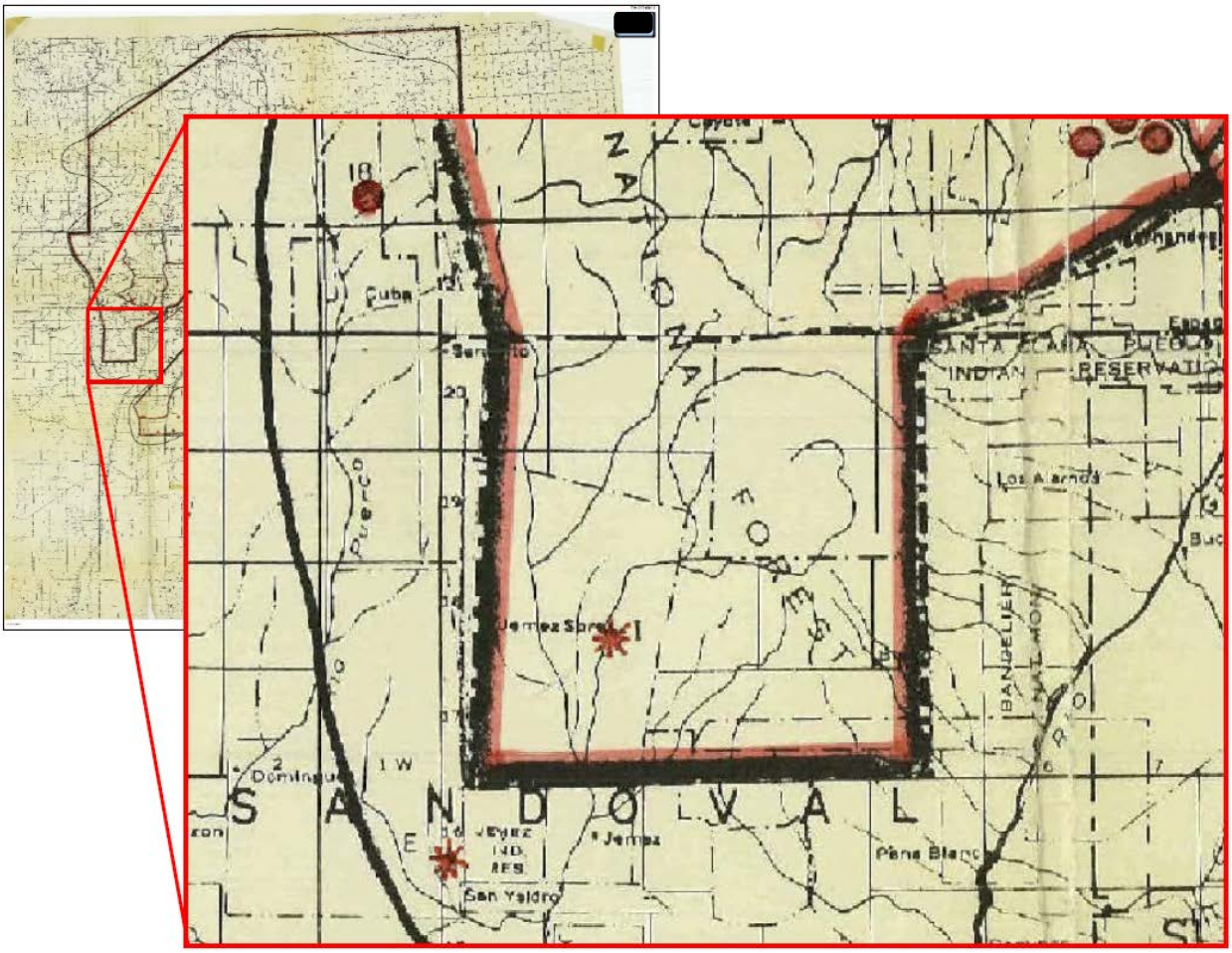

Figure 10. Detail of Jicarilla Apache Map Alleging Aboriginal Title to Entire Valles Caldera

286. In the Jicarilla Apache Tribe's ICC litigation, Santa Clara, San Ildefonso, Santo Domingo, Taos, and Nambe Pueblos stipulated that the Jicarilla Apache Tribe's aboriginal exclusive-use area included the Valles Caldera. See, e.g., Nov. 19 Tr. at 4087:13-4089:3 (Marinelli, Kehoe)("[T]he map indicates that Baca Location 1 remained part of the Jicarilla aboriginal land claim outside of the borders delineated with these pueblos."); Jicarilla Apache Tribe v. United States, ICC Docket No. 22A, Map, Unnumbered Exhibit in ICC Proceedings at 1 (dated Sept. 24, 1962), admitted October 29, 2018, at trial as United States' Ex. DX-DB.

287. The Jicarilla Apache Tribe made its ICC claim after stipulations and negotiations regarding territory disputes with the Pueblos of San Ildefonso, Santo Domingo, Santa Clara, Taos, and Nambe.[111] See, e.g., Nov. 19 Tr. at 4087:13-4089:3 (Marinelli, Kehoe); Santa Clara Pueblo, Restoration Assessment: Santa Clara Pueblo Lands in the "Baca Location #1" Ranch, New Mexico at 16 (dated May 1, 1998), admitted October 29, 2018, at trial as United States' Ex. DX-HH ("Santa Clara Restoration Assessment")("On May 4 1959 Santa Clara Pueblo signed a stipulation with the Jicarilla Apache Tribe which identified the boundaries between the two tribes' I.C.C. claims. This document included an exact description of the Pueblo's Ancestral Homeland boundary in the Baca Location #1.").

288. Jicarilla Apache Tribe's ICC claim includes the Valles Caldera portions that Santa Clara Pueblo and San Ildefonso Pueblo did not claim.[112] See, e.g., Nov. 19 Tr. at 4090:20-4095:21 (Marinelli, Kehoe)(summarizing and analyzing the Pueblos' ICC claims); Kehoe Report at 30-32.

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[111]Jemez Pueblo asks the Court to find that "[t]he Jicarilla Apache have always recognized that the aboriginal lands of Jemez Pueblo belong to the Jemez People, and, that they cannot go onto Jemez lands without Jemez's express or implied consent and permission as a way to acknowledge and recognize the rights of others to their land." Jemez Pueblo's Proposed Findings ¶ 651, at 204 (citing Liebmann et. al. Rebuttal Reports at 63-64). The cited evidence states, however, merely that the author's "study over an adult lifetime of Jicarilla land uses and land claims has not produced a scintilla of evidence of any Jicarilla challenge to the claims of Jemez Pueblo in this case," and that the author's "lifetime of immersion in the traditions, folkways, customs, and religion of [her] Jicarilla Apache people does not suggest to [her] any competing claim or religious objection to the claims of Jemez Pueblo in this case"; the cited evidence says nothing about whether Jicarilla Apache have always recognized that the Valles Caldera belongs to Jemez Pueblo, or whether they believe that they cannot go onto Jemez Pueblo lands without Jemez Pueblo's express or implied consent. See Liebmann et. al. Rebuttal Reports at 63-64. The Court, therefore, will not adopt the proposed fact.

[112]Nancy Akins' Traditional Use Areas in New Mexico further highlights that the Jicarilla Apache Tribe claimed the entire Valles Caldera as within its exclusive aboriginal lands. See Nancy J. Akins, Traditional Use Areas in New Mexico at 70, 72 (dated 1993), admitted October 29, 2018,

289. The Ute Tribe's aboriginal territory extended into the Valles Caldera following the Pueblo Revolt. See, e.g., Dec. 3 Tr. at 5058:14-5059:16 (Marinelli, Anschuetz); Nancy J. Akins, Traditional Use Areas in New Mexico at 169 (dated 1993), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 562.

10. Many Pueblos and Tribes Opposed the Valles Caldera Geothermal Development Project.

290. Pat Dunigan was an enthusiastic advocate for the development of geothermal energy on Baca Location No. 1, and in 1971, Dunigan's Baca Land and Cattle Company executed a lease that gave Union Oil Company of California ("Unocal") the right to explore for and produce geothermal energy within Baca Location No. 1. See, e.g., Nov. 19 Tr. at 4098:3-4101:19 (Kehoe, Marinelli); Valle Grande at 96-97; Memorandum of Lease and Agreement between Dunigan Enterprises and the Baca Land & Cattle Co. and Union Oil Co. at 1 (dated April 19, 1971), admitted October 29, 2018, at trial as United States' Ex. DX-DW.

291. In 1977, after drilling several wells, Unocal joined with PNM in preparing feasibility studies for a fifty-megawatt steam power plant near Redondo Creek, and, one year later, the companies entered into an agreement with the United States Department of Energy ("DOE")

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at trial as Jemez Pueblo's Ex. PX 562. Akins stated that, in "1868, the western Jicarilla claimed the country between the Rio Grande and the San Juan River," and identified Jicarilla's claimed exclusive use area as reaching as far south as Jemez Springs. Traditional Use Areas in New Mexico at 70. Akins also noted that the Jicarilla "claim line [on its ICC map] is the result of negotiations and stipulations concerning overlaps with San Ildefonso, Santo Domingo, Santa Clara, Taos, and Nambe." Traditional Use Areas in New Mexico at 72. See also Oct. 31 Tr. at 617:2-619:9 (Liebmann)(describing archaeological evidence which establishes that Jicarilla Apache made the Valles Caldera a dangerous place for Pueblos into the early twentieth century); Dec. 3 Tr. at 5055:25-5058:13 (Marinelli, Anschuetz)(identifying Baca Location No. 1 as inside Jicarilla Apache's claim map and the Valles Caldera as between the Rio Grande and the San Juan River).

in which the DOE agreed to fund partially the new plant as a demonstration project for geothermal power. See, e.g., Valle Grande at 97-98; Union Oil Company, Baca Project: Geothermal Demonstration Power Plant, Final Report at 1-4 (dated Dec. 1982), admitted November 19, 2018, at trial as United States' Ex. DX-FS.

292. Geothermal development in the Valles Caldera lands centered on an area west and north of Redondo Peak. See, e.g., Baca Project: Geothermal Demonstration Power Plant, Final Report at 3; Valle Grande at 99.

293. The DOE's Final Environmental Impact Statement for the Geothermal Demonstration Program in Baca Location No. 1 describes the Valles Caldera geothermal development project's negative impact on Indian religious values, based partly on public statements and written comments from Indians belonging to affected Pueblos. See, e.g., Final Environmental Impact Statement - Geothermal Demonstration Program, 50 MW Power Plant, Baca Ranch, Sandoval and Rio Arriba Counties, New Mexico at 212-17 (Jan. 1, 1980), admitted October 29, 2018, at trial as United States' Ex. DX-EU ("Final Envtl. Impact Statement")("[T]he Indians consistently cited infringement of religious freedom by the project as a matter of grave concern to them."); Valle Grande at 98-99.

294. The Final Envtl. Impact Statement includes a table that identifies Redondo Peak as a sacred site for the Pueblos of Cochiti, Jemez, San Juan, San Felipe, Santa Clara, Tesuque, and Zia, and states that several Pueblo had recently visited it. See, e.g., Final Envtl. Impact Statement at 167-68 ("In the recent past, visits [to Redondo Peak] have been made by groups from the Zia, Santa Ana, San Filipe [sic], Santa [sic] Domingo, Cochiti, some Pueblos north of Santa Fe, and

the Jemez. . . . Some of the tribes, but not all, claim Redondo Peak as a boundary marker."); Valle Grande at 98-99; Kehoe Report at 46-47.

295. In 1979, Santa Clara Pueblo expressed to the DOE that the Valles Caldera geothermal development project would infringe on Santa Clara Pueblo's ability to practice its religion. See Final Envtl. Impact Statement at 692-94 ("We can state emphatically that the Santa Clara Pueblo does observe religious ceremonies within the project area. DOE has been unaware of these ceremonies because the Pueblo religious societies come to that area and pray in secrecy in order to preserve the power of their religious ceremonies.").

296. In 1979, Cochiti Pueblo testified that the Pueblos of Santa Clara, San Juan, San Ildefonso, Tesuque, Jemez, Zia, Santa Ana, Cochiti, and San Felipe had an interest in the Valles Caldera which required the geothermal development project developers to consult with them before taking further action. See, e.g, Nov. 19 Tr. at 4130:15-4131:7 (Marinelli, Kehoe)(stating that Cochiti Pueblo expressed in 1979 that "many pueblos in the area have a strong interest in Baca Location," and identifying interested Pueblos); Transcript of Public Hearing on Geothermal Demonstration Project at 266 (dated Aug. 30, 1979), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 236 ("[T]he studies made by the Western Mountain -- Western Research, did not take into consideration the thousands of Indians that are on the peripheral of the Baca location.").

297. The Final Envtl. Impact Statement notes that the Pueblos of Cochiti, Santa Clara, and Zia assert that they possess sacred sites within the Valles Caldera, although they refuse to divulge these sites' locations and how the Pueblos use them. See Final Envtl. Impact Statement at 213.

298. In August, 1980, representatives from the Pueblos of Cochiti, Isleta, Jemez, Nambe, San Ildefono, San Juan, Santa Ana, Santa Clara, Santo Domingo, and Zia urged a halt to the Valles Caldera geothermal development project at a public regulatory hearing. See, e.g., Kehoe Report at 49-50 ("At the first hearing on August 26, 1980, officials from the following pueblos appeared and made statements: Cochiti, Isleta, Jemez, Nambe, San Ildefono [sic], San Juan, Santa Ana, Santa Clara, Santo Domingo, and Zia."); Transcript of Proceedings in the Matter of the Petition of the Public Service Company of New Mexico for Authorizations Necessary to Participate in Baca Unit 1 (dated Aug. 26, 1980), admitted October 29, 2018, at trial as United States' Ex. DX-EW.

299. In November, 1980, the Pueblos of Acoma, Santa Clara, and Jemez testified at a public regulatory hearing that the Valles Caldera geothermal development project would impinge on their and other Pueblos' and Tribes' ability to carry out ceremonies at Redondo Peak and the surrounding areas. See, e.g., In re PNM Authorizations at 7, 42-46, 101, 131-49, 189; Kehoe Report at 50.

300. On January 16, 1981, eighteen Pueblos[113] sued the DOE to stop the Valle Caldera geothermal development project. See, e.g., Nov. 19 Tr. at 4099:5-18 (Marinelli, Kehoe)("18 of the 19 pueblos at the time in New Mexico ultimately sued the Secretary of Energy to stop federal support for the project."); Pueblo of Jemez, et al v, Secretary of Energy of the United States, Civil

[113]Zuni Pueblo is the only Pueblo in New Mexico that did not participate in the geothermal project litigation. See Nov. 19 Tr. at 4099:5-18 (Marinelli, Kehoe); Pueblo of Jemez, et al v, Secretary of Energy of the United States, Civil Action No. 81-0113 -- Complaint for Injunctive Relief at 1 (dated Jan. 16, 1981), admitted October 29, 2018, as United States' Ex. DX-FB.

Action No. 81-0113 -- Complaint for Injunctive Relief at 1 (dated Jan. 16, 1981), admitted October 29, 2018, as United States' Ex. DX-FB ("Jemez v. DOE, Complaint").

301. The eighteen Pueblos' filings in the Valles Caldera geothermal development project litigation asserted that, as of 1981, many Tribes used the Valles Caldera and Redondo Peak. See, e.g, Nov. 19 Tr. at 4122:23-4128:12 (Marinelli, Kehoe)(discussing Valles Caldera geothermal development project testimony that describes Cochiti Pueblo's, Jemez Pueblo's, San Felipe Pueblo's, and Tesuque Pueblo's Valles Caldera use); Jemez v. DOE, Complaint at 5 ("[F]rom pre-Columbian times to the present, the plaintiff Pueblos have regularly and continuously practiced their respective religions on and near Redondo Peak").

302. [redacted] See, e.g., Pueblo of Jemez, et al. v. Secretary of Energy of the United States, No. CIV 81-0113, Memorandum in Support of Plaintiff's Motion for Summary Judgment and Attachment A at 50 (D.D.C. Oct. 24, 1981), admitted October 29, 2018, at trial as United States' Ex. DX-FH ("Jemez v. DOE Summary Judgment Motion")[redacted] Hearings on the Draft Environmental Impact Statement -- Geothermal Demonstration Program, Baca Ranch, Sandoval and Rio Arriba Counties, New Mexico, Before the All Indian Pueblo Council at 47:8-14 (dated Aug. 30, 1979), admitted October 29, 2018, at trial as United States' Ex. DX-ER ("Aug. 30 AIPC Test.")(Pino)[redacted]

303. Through at least the 1970s, Zia Pueblo held sacred [redacted] See, e.g., Jemez v. DOE, Summary Judgment Motion at 50 ([redacted]); Aug. 30 AIPC Test. at 47:8-14 (Pino).

304. Through at least the 1970s, Zia Pueblo's, Santa Clara Pueblo's, and other Pueblos' and Tribes' ancestors had their religious centers in the Valles Caldera and used Redondo Peak for ceremonial purposes. See, e.g, Nov. 19 Tr. at 4122:23-4128:12 (Marinelli, Kehoe); Jemez v. DOE, Summary Judgment Motion at 42-43 ("Since pre-Colombian times, Pueblo Indians have regularly and consistently practiced their religions on and near Redondo Peak. . . . Throughout these centuries, it appears these Pueblos have had their religious center at the Valles Caldera and have practiced their religious ceremonies there."); Hearings on the Draft Environmental Impact Statement -- Geothermal Demonstration Program, Baca Ranch, Sandoval and Rio Arriba Counties, New Mexico, Before the All Indian Pueblo Council at 49:3-50:3 (dated Aug. 16, 1979), admitted October 29, 2018, at trial as United States' Ex. DX-EQ, ("AIPC Hearings")(Tafoya)(asserting that Santa Clara Pueblo uses Redondo Peak and has other sacred locations within the Valles Caldera).

305. [redacted] See, e.g., Jemez v. DOE, Summary Judgment Motion at 50 [redacted]; Kehoe Report at 42.

306. The Valles Caldera and [redacted] are central to both Jemez Pueblo's and Zia Pueblo's beliefs. See, e.g., Jemez v. DOE, Summary Judgment Motion at 51 (asserting that Ellis' "own field notes going back to the early 1950s and [her] most recent studies of the Jemez and Zia

Pueblos establish the central importance of the Valles Caldera and Redondo Peak to the religious beliefs of the Pueblos."); Kehoe Report at 42-43.

307. A map that Zia Pueblo created for the Valles Caldera geothermal development project litigation identifies Valles Caldera peaks, and associated place names, [redacted] See, e.g., Nov. 6 Tr. at 1964:11-1965:6 (Marinelli, Ferguson); Ellis Zia Map at 1 (dated 1981), admitted November 6, 2018, at trial as United States' Ex. DX-EY[114]; Jemez v. DOE, Summary Judgment Motion at 161 (depicting above-referenced 1981 map); Anschuetz Report at 159-165; id. at 193-95 ([redacted]).

308. In 1981, the Pueblos of Jemez, Santa Clara, and Zia used the Valles Caldera to an extent greater than the fifteen other Pueblos that sued the DOE. See, e.g., Richard W. Hughes and

[114]Jemez Pueblo asks the Court to find:

> DX-EY identifies nine to sixteen Zia place names within the Claim Area. [See Nov. 6 Tr. at 1976:11-1977:4 (Ferguson)]. DX-EY shows nine circles inside the Claim Area. [redacted] [See Nov. 6 Tr. at 196:16-1966:23 (Ferguson)]. The United States did not ask Mr. Lucero, the one witness from the Pueblo of Zia, any questions about DX-EY, whether the information in DX-EY was accurate, or whether he had ever seen DX-EY. Therefore, limited weight should be given to DX-EY.

Jemez Pueblo's Proposed Findings ¶ 624, at 197. The Court finds that the Ellis Zia Map credibly aggregates Zia Pueblo place names within and near the Valles Caldera, despite not associating such names with Zia Pueblo societies. See Ellis Zia Map at 1. The Court, therefore, will not adopt the proposed fact.

Florence Hawley Ellis, A Preliminary Report on the Impacts of Geothermal Power Development in the Valles Caldera of NM on the Religious Practices and Beliefs of the Pueblo Indians at 5 (dated Aug. 18, 1980), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 110 ("Geothermal Impacts Report")("[T]he . . . list of Pueblos concerned with . . . religious use of the Redondo Peak . . . is exactly that list which covers the peoples whom . . . had their religious center there. The three which have continued that use to the greatest extent in the modern period are Jemez, Zia, and Santa Clara."); Kehoe Report at 47-50.

309. When Dunigan's companies attempted to intervene in the eighteen Pueblos' suit against the DOE, the eighteen Pueblos argued that the United States District Court of the District of Columbia should deny the motion to intervene, because the Dunigan's ownership interests were not at issue. See, e.g., Nov. 19 Tr. at 4148:2-4149:19 (Marinelli, Kehoe); Pueblo of Jemez et al. v. Secretary of Energy, No. CIV. 81-0113, Plaintiffs' Response to Intervention Motion of Dunigan Enterprises, et al. at 2 (D.D.C. Nov. 18, 1981), admitted October 29, 2018, at trial as United States' Ex. DX-FL ("Plaintiffs do not contest the ownership of -- nor do they seek any interest in -- movants' land.").

310. In January, 1982, Unocal, PNM, and the DOE concluded that geothermal development within the Valles Caldera was not economically viable, and thereafter they terminated the project. See, e.g., Valle Grande at 100-01; Union Oil Company, Baca Project: Geothermal Demonstration Power Plant, Final Report at 14 (dated Dec. 1, 1982), admitted November 19, 2018, at trial as United States' Ex. DX-FS.

311. In May 1982, Indians from multiple Pueblos, including Jemez Pueblo, testified against the Valles Caldera geothermal development project at a New Mexico Public Service

Commission hearing; Jemez Pueblo testified that Redondo Peak "is a big cathedral for all Indian religions from the Indian tribes of New Mexico and others," and that many Tribes conduct religious services within the Valles Caldera. E.g., Transcript of Proceedings in the Matter of the Petition of the Public Service Company of New Mexico for Authorizations Necessary to Participate in Baca Unit 1 at 61-63 (dated May 27, 1982), admitted October 29, 2018, at trial as United States' Ex. DX-FQ. See, e.g., Transcript of Proceedings in the Matter of the Petition of the Public Service Company of New Mexico for Authorizations Necessary to Participate in Baca Unit 1 at 56-57, 77-78; Kehoe Report at 50 ("Rosendo Gachupin, a former governor of Jemez Pueblo, said that the opposition was due to the impact on 'our religious services, usually participated in that area, not from the Jemez alone, also from the tribe[s] along the Rio Grande.'" (quoting Transcript of Proceedings in the Matter of the Petition of the Public Service Company of New Mexico for Authorizations Necessary to Participate in Baca Unit 1 at 62)).

312. In the late 1980s, the Pueblos of Jemez, San Ildelfonso, San Juan, and Santa Clara opposed as an Indian religious rights infringement PNM's proposed Ojo Line Extension, which sought to construct a power line through the Jemez Mountains, including a six-to-seven mile segment cutting across the Baca Location No. 1. See, e.g., Kehoe Report at 51; Valles Grande at 114-15.

313. Jemez Pueblo admitted in a hearing on the Ojo Line Extension before the New Mexico Public Service Commission that the Valles Caldera's private owners had restricted Jemez Pueblo's Valles Caldera access since well before 1987. See, e.g., Nov 19 Tr. at 4154:9-4156:18

(Marinelli, Kehoe); Test. of Joe S. Sando[115] re: Ojo Line Extension, New Mexico Public Serv. Comm'n Case No. 2382, at 34 (dated Aug. 10, 1982), admitted October 29, 2018, at trial as United States' Ex. DX-FR ("In the distant past Valle Grande served as an eagle catching area by an Eagle Catching society. This . . . society was responsible for supplying feathers to all the other societies in the tribe. . . . Already the eagle catchers cannot return but have to obtain the eagle feathers through government offices from Idaho."); Kehoe Report at 51.

11. Congressional Action and Legislation Recognizes that Many Tribes Have an Interest in the Valles Caldera.

314. The Act of November 15, 1990, 104 Stat. 2762, known as the "Baca Location No. 1 Land Acquisition and Study Act," directed the United States Secretary of Agriculture to study

[115]Sando testified in opposition to the geothermal project that Jemez Pueblo "felt the loss of . . . part of the [Valles Caldera] in the first hald [sic] of the Eighteen Hundreds to the" Baca heirs, and further testified that Jemez Pueblo "used the area as our own until 1904 [and] . . . Jemez names carved on the Aspen trees [are] dated 1927, which was the last time [Jemez pueblo] had use of the area." Tr., Hr'gs on the Geothermal Env. Impact Statement at 51-53. Moreover, Sando testified that a [redacted] Tr., Hr'gs on the Geothermal Env. Impact Statement at 53. [redacted] See Joe S. Sando, History of Jemez Pueblo Aboriginal Land, Spanish Land Grants, Purchases and Acquisitions by the American Government at 14 (dated May 1983), admitted November 15, 2018, at trial as United States' Ex. DX-FU ("Jemez Pueblo History"). Sando recounted the history surrounding Jemez Pueblo's "loss of aboriginal land," and included in that history "the aboriginal land identified today as the Valle Grande and also the Baca Location No. [1]." Jemez Pueblo History at 14. He likened Jemez Pueblo's Valles Caldera loss to "the Espiritu Santo" lands for which Jemez Pueblo sought compensation before the ICC, and acknowledged that Jemez Pueblo had to "get permission from the owner" [redacted]. Jemez Pueblo History at 14-15. Hence, Sando's writing and testimony establish that private owners severely restricted Jemez Pueblo's Valles Caldera use before 2000. See, e.g., at Jemez Pueblo History at 12-15; Designation of Deposition Testimony -- Allen Gachupin at 26:9-22 (Gachupin)(recognizing Sando as an "expert on Jemez history" with "a tremendous amount of knowledge").

the Valles Caldera and options for its acquisition. E.g., Kehoe Report at 52; VCNP Land Use History at 238 ("The stated purpose of the Act is . . . to authorize the Secretary of Agriculture to study the Baca Location to determine its 'scenic, geologic, recreational, timber, mineral, grazing, and other multiple use attributes,' and to study options for federal acquisition of the property, in whole or in part." (quoting 104 Stat. 2762)).

315. Before acquiring the Valles Caldera, Congress consulted with several Tribes and Pueblos, including Santa Clara Pueblo,[116] Zia Pueblo, San Ildefonso Pueblo, and Jemez Pueblo, regarding the Pueblos' and the Tribes' historical, traditional, and cultural ties to the Valles Caldera, and their continued interests in maintaining their connections to the land through traditional practice. See, e.g., Trial Transcript at 5213:23-5216:1 (taken Dec. 5, 2018), filed February 19,

[116]Jemez Pueblo asks the Court to find that

> Ziehe testified that the main point of his discussions with the Pueblo of Santa Clara and the development of the legislative language in the Act dealt with the assignment of the northeast corner of the Baca Location No. 1, "so that it could be purchased by the [P]ueblo simultaneously with the United States purchasing the remainder of the Preserve."

Jemez Pueblo's Proposed Findings ¶ 598, at 186 (quoting Dec. 5 Tr. at 5216:1-10 (Ziehe)). Although the Court accepts how Jemez Pueblo characterizes Ziehe's testimony, the Court concludes that such testimony does not detract from Santa Clara Pueblo's sincere and longstanding interest in the entire Valles Caldera. See, e.g., Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 1 (Dec. 16, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-QG ("[T]he Santa Clara Pueblo people have used the Valle Caldera for hundreds of years for cultural activities, and continue to use the Valle Caldera for such activities, including traditional gathering of medicinal and ceremonial plants and other cultural resources, and is the Pueblo's cultural and spiritual sanctuary, that is still used by the Pueblo's Traditional Leaders today . . . ."); Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 3 ("The activities of our people are of a sensitive and religious nature such that details cannot be divulged but it is fair to say that the [Valles Caldera] is part of our cultural sanctuary, our pharmacy, and our grocery store.").

2019 ("Dec. 5 Tr.")(Brar, Ziehe[117])(discussing Congress' consultation with Tribes regarding Redondo Peak); Kehoe Report at 53-56.

316. Congress did not grant special rights or the ability to purchase Redondo Peak to any one Tribe, despite consulting with several Tribes regarding Redondo Peak's significance to them. See, e.g., Dec. 5 Tr. at 5213:23-5216:1; id. at 5216:2-5217:13 (Brar, Ziehe)(discussing consultation with Santa Clara Pueblo); id. at 5218:12-23 (Brar, Ziehe)(discussing consultation with San Ildefonso Pueblo); id. at 5218:24–5219:5 (Brar, Ziehe)(discussing consultation with Jemez Pueblo); id. at 5219:6-12 (Brar, Ziehe)(discussing consultation with Zia Pueblo); id. at 5219:24-5222:7 (Brar, Ziehe)(discussing Redondo Peak's significance to Zia Pueblo and Jemez Pueblo); id. at 5225:16-5226:7 (Brar, Ziehe)(discussing consultation with the Pueblos of Santa Clara, San Ildefonso, Zia, and Jemez); Kehoe Report at 53-56.

317. In 1997, after the Dunigan family expressed a willingness to sell the Valles Caldera to the United States, the Honorable Jesse Francis Bingaman Jr., former United States Senator from the State of New Mexico, introduced a bill to have the Secretary of Agriculture purchase Baca Location No. 1 in its entirety. See, e.g., Mem. from Mike Menge, Committee on Energy and Natural Resources, United States Senate to Members Subcommittee on Forests and Public Land Management at 3 (dated March 7, 2000), admitted October 29, 2018, at trial as United States' Ex. DX-ID; Letter from Walter Dasheno, Governor of Santa Clara Pueblo, to Andy Dunigan at 1 (dated

[117]Before serving as Executive Director of the Valles Caldera Trust, Ziehe worked as a legislative assistant to the Honorable Pietro "Pete" V. Domenici, former United States Senator from the State of New Mexico, where Preservation Act's development was among his primary responsibilities. See Dec. 5 Tr. at 5207:3-25 (Brar, Ziehe).

Sept. 26, 1997), admitted October 29, 2018, at trial as United States' Ex. DX-GY; Kehoe Report at 53.

318. In 1997, Santa Clara Pueblo argued that any legislation addressing the United States' Baca Location No. 1 acquisition should transfer 9,100 acres within Baca Location No. 1, including Santa Clara Creek's headwaters, to Santa Clara Pueblo. See, e.g., Letter from Walter Dasheno, Governor of Santa Clara Pueblo, to Andy Dunigan at 1; Tribal Council, Pueblo of Santa Clara, Resolution No. 97-18 at 1 (dated Oct. 22, 1997), admitted October 29, 2018, at trial as United States' Ex. DX-GZ.

319. In February, 1998, San Ildefonso Pueblo informed Senator Bingaman that the ICC determined that lands within Baca Location No. 1 were San Ildefonso Pueblo's exclusive aboriginal lands and that San Ildefonso Pueblo also used, although not exclusively, most of the remaining lands in the grant through the Valles Caldera's private ownership period. See, e.g., Nov. 19 Tr. at 4160:8-4162:22 (Marinelli, Kehoe); Letter from Harvey A. Martinez, Governor, Pueblo of San Ildefonso to Senator Jeff Bingaman Regarding Federal Government Purchase of Valle Grande at 1 (dated Feb. 20, 1998), admitted October 29, 2018, at trial as United States' Ex. DX-HE ("San Ildefonso people have worked with present owners concerning access to Pueblo religious sites, for example in the Redondo Peak area.").

320. In 1998, San Ildefonso Pueblo conveyed to Congress that it ran livestock, hunted eagles, and procured minerals from the Valles Caldera both before and during the twentieth century. See, e.g., Nov. 19 Tr. at 4057:21-4062:1 (Marinelli, Kehoe); Nov. 29 Tr. at 4582:24-4583:16 (Marinelli, Anschuetz); Letter from Harvey A. Martinez, Governor, Pueblo of San

Ildefonso, to Senator Jeff Bingaman Regarding Federal Government Purchase of Valle Grande at 1.

321. In 1998, San Ildefonso Pueblo conveyed to the Honorable William T. Redmond, former United States Representative from the State of New Mexico, that the Valles Caldera contains a portion of San Ildefonso Pueblo's exclusive aboriginal territory and that many Pueblos have shared the remaining areas for many centuries. See, e.g., Nov. 19 Tr. at 4160:16-4163:15 (Kehoe, Marinelli)(discussing San Ildefonso's position regarding the United States' proposed Valles Caldera acquisition); Nov. 29 Tr. at 4565:17-4569:10 (Marinelli, Anschuetz)(explaining the concept of tetrads[118] within a Pueblo's cultural landscape); Position Statement -- Pueblo of San Ildefonso On Potential Federal Legislation Concerning Tribal Aboriginal Title Claims to Baca Location No. 1 Submitted to Hon. Bill Redmond at 2 (dated July 31, 1998), admitted November 19, 2018, at trial as United States' Ex. DX-HL ("San Ildefonso Pueblo takes the position that none of this can be treated as exclusively claimed by any one of the neighboring Pueblos. Therefore, . . . legislation should not provide for adjudication of separate, distinct Pueblo claims. Rather, the legislation should recognize that . . . Pueblos have shared [the area] since before recorded history.").

[118]A tetrad is merely "a group of four," Tetrad, Wikipedia, https://en.wikipedia.org/wiki/Tetrad (last visited June 29, 2019), however, in the Puebloan context, a tetrad demarcates

> [t]he four cardinal directions that define Pueblo space . . . , providing geographic boundaries for the Pueblo world: the outermost tetrad is bounded by four sacred mountains; the next is bounded by the sacred . . . flat-topped hills; the third tetrad is identified by the principal shrines located just beyond the pueblo; and the final tetrad represents the dance plazas within the pueblo.

Sascha T. Scott, A Strange Mixture: The Art and Politics of Painting Pueblo Indians 165 (2015).

322. In 2000, Jemez Pueblo expressed in testimony before the United States Senate its support for the United States' proposed Valles Caldera acquisition. See, e.g., U.S. Senate, Valles Caldera Preservation Act: Hearing Before the Subcommittee on Forests and Public Land Management of the Committee on Energy and Natural Resources, 106th Cong. 2nd sess. at 62 (dated March 10, 2000), admitted October 29, 2018, at trial as United States' Ex DX-IF (Statement of Raymond Gachupin, Governor, Pueblo of Jemez)("For the record, yes, we strongly support the proposed acquisition of the Valles Caldera by the USDA Forest Service and we strongly support the concept of multiple use.").

323. The United States and the State of New Mexico have historically permitted Pueblos through Acts of Congress or through purchase to acquire lands that the Pueblos consider their ancestral homelands. See, e.g., Nov. 9 Tr. at 2710:17-2711:22 (West, Suina)(discussing how Cochiti Pueblo purchased lands to effect an exchange for ancestral homelands with the New Mexico State Land Office); Nov. 7 Tr. at 2068:13-25 (Lucero)(discussing how Zia Pueblo through Congressional Act obtained lands adjacent to the Ojito Wilderness); Nov. 9 Tr at 2672:15-2673:3 (Marinelli, Madalena)(affirming that the United States permitted Zia Pueblo to purchase the Ojito Wilderness); Designation of Deposition Testimony -- Gilbert Suazo at 13:13-23, admitted November 15, 2018, at trial as Jemez Pueblo's Proposed Findings PX 559 (Suazo)(discussing Taos Pueblo's appeal to Congress to recover title to Blue Lake, which Congress eventually recognized).

324. Jemez Pueblo asked Congress to permit it to purchase 200 acres on Redondo Peak.[119] See, e.g., U.S. Senate, Valles Caldera Preservation Act: Hearing Before the

[119]The United States has reserved trust lands for Jemez Pueblo on at least six occasions, which Jemez Pueblo recognizes in litigation and pre-litigation planning documents. See, e.g.,

Subcommittee on Forests and Public Land Management of the Committee on Energy and Natural Resources, 106th Cong. 2nd sess. at 61 (Statement of Raymond Gachupin, Governor, Pueblo of Jemez)("In desperation. Senators, we therefore ask this honorable committee to consider granting us a right to acquire a mere 200-acre tract of land on top of Redondo Peak that encompasses the primary sacred shrine of the Jemez people."); Testimony of the Pueblo of Jemez Before the Senate Committee on Energy and Natural Resources; Subcommittee on Forests and Public Land Management at 7 (dated March 10, 2000), admitted October 29, 2018, at trial as United States' Ex. DX-IE)(requesting right to purchase 200 acres on Redondo Peak "in desperation.").

325. [redacted].[120] See, e.g., Letter from

United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CIV 83-1041 MV\WPL, Opening Brief of Pueblos of Santa Ana, Zia and Jemez, and the United States, on *Winters* Reserved Rights at 1-4 (D.N.M. Sept. 25, 2012)(Vázquez, J.)m admitted November 19, 2018, at trial as United States' Ex. DX-UA (discussing congressional action that patented approximately 17,000 acres of land for Jemez Pueblo in 1864 and Executive Orders issued in 1906 and 1911, which together set aside approximately 15,000 acres for Jemez Pueblo); Bureau of Indian Affairs, "Pueblo of Jemez Land Status" at 27-35 (dated April 1, 1940), admitted October 29, 2018, at trial as United States' Ex. DX-TY; Pueblo of Jemez Strategic Plan 2000 at 8-9 (dated Aug. 1, 2000), admitted November 20, 2018, at trial as United States' Ex. DX-IQ; Jemez Pueblo Land Use Plan - IRMP at 21 (2007), admitted October 29, 2018, at trial as United States' Ex. DX-KW (stating that acquired parcels "were favored because [they] . . . fit with the government's perception of that time of an agrarian Native American").

[120]The United States asks the Court to find that Jemez Pueblo's Redondo Peak characterization conveyed to Congress that Jemez Pueblo "1) lacked similar attachment to the remainder of the Preserve lands; and 2) lacked title to the entire Valles Caldera." United States' Proposed Findings ¶ 199, at 52 (citing Letter from Raymond Gachupin, Governor of Jemez Pueblo, to Senator Jeff Bingaman Re: S.B. 1892 -- To Establish Valles Caldera Preserve at 1-2 (dated Feb.

Raymond Gachupin, Governor of Jemez Pueblo, to Senator Jeff Bingaman Re: S.B. 1892 - To Establish Valles Caldera Preserve at 1-2 (Feb. 22, 2000), admitted October 29, 2018, at trial as United States' Ex. DX-IB (emphasizing Jemez Pueblo's two "issues respecting S.B. 1892 which are the most critical"); U.S. Senate, Valles Caldera Preservation Act: Hearing Before the Subcommittee on Forests and Public Land Management of the Committee on Energy and Natural Resources, 106th Cong. 2nd sess. at 61 (Statement of Raymond Gachupin, Governor, Pueblo of Jemez).

326. The legislation that Congress ultimately passed to acquire the Valles Caldera did not include provisions for Jemez Pueblo to purchase the requested 200 acres on Redondo Peak. See, e.g., Nov. 20 Tr. at 4301:1-4302:18 (D. Yepa)(asserting that Jemez Pueblo's purchase request was its "last effort to get something" from the United States' Valles Caldera acquisition); id. at 4337:8-22 (D. Yepa); Kehoe Report at 54-56.

327. Jemez Pueblo initially proposed an amendment to the Preservation Act that would give it a seat on the Valles Caldera Trust board but the Honorable Pietro "Pete" V. Domenici, former Senator from the State of New Mexico, resisted Jemez Pueblo's initial proposal, and Jemez Pueblo thereafter proposed a second amendment to reserve an American Indian seat on the board, which Congress ultimately rejected. See, e.g., Testimony of the Pueblo of Jemez Before the Senate

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22, 2000), admitted October 29, 2018, at trial as United States' Ex. DX-IB). The cited support states, however, only that recovering Redondo Peak is for Jemez Pueblo one of two "most critical" issues with the proposed legislation, and it makes no representations regarding Jemez Pueblo's attachment to or claim to the entire Valles Caldera. See Letter from Raymond Gachupin, Governor of Jemez Pueblo, to Senator Jeff Bingaman Re: S.B. 1892 -- To Establish Valles Caldera Preserve at 1-2 (emphasizing Jemez Pueblo's two "issues respecting S.B. 1892 which are the most critical"). The Court, therefore, will not adopt the proposed fact.

Committee on Energy and Natural Resources, Subcommittee on Forests and Public Land Management at 3-4 (March 10, 2000), admitted November 19, 2018, at trial as United States' Ex. DX-IE ("For your consideration, the Pueblo of Jemez promotes the concept of multiple-use and would honor the opportunity to actively participate on the Valles Caldera Board of Trustees."); Nov. 20 Tr. at 4303:13-4304:12 (D. Yepa)("Jemez wanted a Native American seat. Actually, Jemez wanted a Jemez seat. But, again, in conversations with Senator Domenici, there was some resistance in having just a Jemez seat. And that's why I think that a representative of a federally-recognized Indian tribe or pueblo is in there.").

328. Jemez Pueblo privately sought to acquire the entire Valles Caldera before the United States purchased the land in 2000, yet officially it supported the United States' efforts thereto. See, e.g., Nov. 5 Tr. at 1551:8-22 (Marinelli, Chinana)(affirming that Jemez Pueblo's congressional testimony said for the record: "Yes, we strongly support the proposed acquisition of the Valles Caldera."); id. at 1551:8-12 (Marinelli, Chinana)(affirming that, before Jemez Pueblo's congressional testimony, Jemez Pueblo's Tribal Council "discussed the best way of getting the Valles Caldera back to Jemez"); Designation of Deposition Testimony -- Allen Gachupin at 115:18-116:21, admitted November 20, 2018, at trial as United States' Ex. DX-JX-2 ("Deposition Testimony - Allen Gachupin")(Marinelli, A. Gauchupin)("[W]e already wanted the whole thing . . . but we figured we'd at least soften the situation here by not being overzealous and where Domenici and the folks can at least be more amenable, to be more receptive, to something to that effect there."); Draft Letter From Governor Madalena to Other Tribes at 1 (dated Feb. 28, 2012), admitted November 9, 2018, at trial as United States' Ex. DX-UV ("Although our Indian title remains unextinguished we assumed the 12-year statute of limitation of the Federal Quiet Title

Act was a barrier to our recovery of these lands. To our advantage, in 2000, the United States purchased the Baca location from private owners.").

329. Rather than agreeing to Jemez Pueblo's request for a seat on the Valles Caldera Trust Board or for 200 acres on Redondo Peak, Congress recognized many Tribes' continued interests in the Valles Caldera. See, e.g., Nov. 20 Tr. at 4310:6-15 (D. Yepa)(affirming that, as a Valles Caldera Trust board member, Yepa "had a duty to consult with all Native American tribes"); Deposition Testimony -- Allen Gachupin at 101:6-103:2 (Marinelli, Gachupin); State of New Mexico, Senate Floor Amendment to Senate Joint Memorial 11, Forty-Third Legislature, Second Session, at 2 (dated Feb. 5, 1998), admitted October 29, 2018, at trial as United States' Ex. DX-HD ("WHEREAS, the pueblos of Jemez, San Ildefonso and Santa Clara have long-standing traditional and cultural roots in the Valles Caldera and support the federal acquisition of the area . . . BE IT RESOLVED . . . that the New Mexico congressional delegation support . . . legislation authorizing the purchase . . . of the Baca location number 1.").

330. Congress' decision to purchase the Valles Caldera permits other Tribes and the public to visit Redondo Peak in a manner that subverts Jemez Pueblo's religious values. See, e.g., Nov. 20 Tr. at 4365:18-4366:2 (Marinelli, Gachupin)([redacted]); Dec. 5 Tr. at 5322:8-12 (Silva-Bañuelos)([redacted]); id. at 5324:16-19 (Silva-[redacted]

c); id. at 5332:7-24 (Leonard, Silva-Bañuelos)([redacted]); id. at 5337:16-5341:3 (Leonard, Silva-Bañuelos)([redacted]).

331. The National Park Service issues special use permits, which grant the public greater access to and use of the Valles Caldera that National Park Service does not otherwise allow, and the Superintendent, at his or her discretion, can waive the permit's cost for Tribal, state, and local government entities. See, e.g., Dec. 5 Tr. at 5333:23-5334:24 (Leonard, Silva-Bañuelos)("A special use permit is a form of authorization that the Park Service uses to provide additional access or permission to do something that is generally not allowed by the general public. So there are different types of permits."); id. at 5333:23-5334:24 (Leonard, Silva-Bañuelos); id. at 5335:9-16 (Leonard, Silva-Bañuelos)("I do have authorities within the [National Park Service] management policies that I can waive the fees for special use permits for tribal, state, and local governments, and a few other examples if it's in the best interests of the government, or if it's a nonprofit entity.").

332. The National Park Service issues to the public educational permits, research permits, and commercial filming permits, each of which enable the public greater Valles Caldera access than it would have otherwise. See, e.g., Dec. 5 Tr. at 5335:3-8 (Silva-Bañuelos)("The education permit is free, the research permit is free, the special use permit comes with a requirement for cost recovery -- we have to recover the costs of issuing the permit. The commercial

use and film permits also have a cost recovery fee and some other associated fees."); id. at 5335:24-5336:1 (Silva-Bañuelos)("The permit system is our way of allowing for an expanded set of uses by either the general public or specific entities.").

333. On July 25, 2000, the Dunigans sold 89,716 acres of Baca Location No. 1 to the United States for the sum of $96,523,042.00, and the lands thereafter formally became known as the Valles Caldera National Preserve.[121] See, e.g., Warranty Deed and Assignment of Rights Under Warranty Deed and Reciprocal Conservation and Access Easement between Dunigan

[121]The Dunigans on the same date sold to Santa Clara Pueblo a 5,045.5298 acre parcel, which Santa Clara Pueblo considers its aboriginal territory, for $4,476,958.00, although Santa Clara Pueblo previously had labored to obtain a larger parcel within Baca Location No. 1. See, e.g., Nov. 16 Tr. at 3851:13-21 (deBuys); id. at 3854:3-6 (deBuys); Santa Clara Restoration Assessment at 18-19; Warranty Deed and Reciprocal Conservation and Access Easement Between Dunigan Enterprises et al. and Pueblo of Santa Clara (dated July 25, 2000) admitted October 29, 2018, at trial as United States' Ex. DX-IH; Letter from Walter Dasheno, Governor of Santa Clara Pueblo, to Andy Dunigan at 1 (dated Sept. 26, 1997), admitted October 29, 2018, at trial as United States' Ex. DX-GY; Letter from Walter Dasheno Governor, Santa Clara Pueblo, to William C. Scott, Modrall, Sperlin, Roehl, Harris and Sisk, P.A. (dated May 20, 1998), admitted November 19, 2018, at trial as United States' Ex. DX-HI; Letter from Walter Dasheno, Governor, Santa Clara Indian Pueblo to William C. Scott, Modrall, Sperling, Roehl, Harris and Sisk, P.A. (dated July 17, 1998), admitted November 20, 2018, at trial as United States' Ex. DX-HJ. Santa Clara Pueblo also purchased a "Conservation and Access Easement," which imposes restrictions on a portion of the Valles Caldera "for the benefit of the adjoining lands of the Pueblo of Santa Clara." Warranty Deed and Reciprocal Conservation and Access Easement at 4. Santa Clara's easement provides for, among other things, a procedure under which Santa Clara can obtain temporary "exclusive use" of areas within the easement, and imposes land use restrictions on the Valles Caldera portion subject to Santa Clara's easement. Warranty Deed and Reciprocal Conservation and Access Easement at 14-19. Santa Clara Pueblo thereafter quitclaimed to the United States its right, title, and interests, including interests based on aboriginal and recognized title to the remaining Valles Caldera lands. See, e.g., Dec. 3 Tr. at 5153-5156:9-17 (Chavarria); Quitclaim Deed Between Pueblo of Santa Clara and the United States at 12-14 (dated June 15, 2000), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 19.

Enterprises et al. and United States of America at 1 (July 25, 2000), admitted October 29, 2018, at trial as United States' Ex. DX-IG; Valles Grande at 122.

334. Congress amended the Preservation Act to direct the United States to acquire the Valles Caldera's outstanding mineral interests, which the United States' acquired in 2006 for $3,800,000.00. See, e.g, United States v. Harrell,[122] 642 F.3d 907, 910-11 (10th Cir. 2011); Valles Grande at 123.

335. The United States spent approximately $31,000,000.00 between 2000 and 2009 to restore and manage the Valles Caldera, and it has continued to invest in the Valles Caldera since 2009. See, e.g., Government Accountability Office, Valles Caldera: The Trust Has Made Progress but Faces Significant Challenges to Achieve Goals of the Preservation Act at 6 (Oct. 1, 2009), admitted October 29, 2018, at trial as United States' Ex. DX-LK; Dec. 5 Tr. at 5396:8-9 (Silva-Bañuelos)(asserting that the Valles Caldera's operating budget while under trust "ranged from about $3 million to $5 million per year").

336. Because Jemez Pueblo cannot afford to maintain the Valles Caldera without federal assistance, Jemez Pueblo's management plan for the Valles Caldera involves asking the United States to fund the Valles Caldera's management costs. See, e.g., Nov. 20 Tr. at 4376:14-15 (Marinelli, Gachupin)(affirming that the Jemez fire chief has "no clue" "how much it cost to fight

[122]The United States asks the Court to find that "Jemez Pueblo did not seek to intervene in [United States v. Harrell]." United States' Proposed Findings ¶ 207, at 55. The United States provides no support for this proposed fact, and the Court therefore will not adopt it. Although the record indicates that Jemez Pueblo is not a named party to the case, see United States v. Harrell, 642 F.3d at 907, nothing in the record indicates that Jemez Pueblo did not attempt to intervene.

the Thompson Ridge Fire"[123]); Nov. 9 Tr. at 2587:4-2588:7 (Marinelli, Madalena)(affirming that Jemez Pueblo does not have the funds to manage the Valles Caldera and that its "management plan was to rely on the Park Service to pay for management of the Valles Caldera if Jemez wins the lawsuit"); Nov. 9 Tr. at 2652:12-2653:21 (Luebben, Madalena)("[T]he plan would be . . . , yes, going to co-management with the Park Service. Have the Park Service be a provider, be an assistance of the management and continue to run it as they are running it."); id. at 2655:5-8 (Luebben, Madalena)(affirming that Jemez Pueblo "expect[s] the Park Service to carry a share of the cost of maintain the Valles Caldera").

12. Congressional Action and Legislation to Transfer the Valles Caldera National Preserve to the National Park Service Confirms that Many Tribes Maintain Interests in the Valles Caldera That Are Averse to Jemez Pueblo's Aboriginal Title Claim.

337. In 2010, Jemez Pueblo expressed to Senator Bingaman its belief that it had aboriginal title to the Valles Caldera, and requested that Congress transfer the Valles Caldera to it. See, e.g., Dec. 5 Tr. at 5274:13-18 (Silva-Bañuelos)("I also remember Jemez Pueblo at the time as we were considering a change in the management structure for Valles Caldera, that Governor Madalena expressed his interest that if Congress is going to make any changes, that it transfer the Preserve to Jemez Pueblo."); id. at 5275:19-5276:1 (Silva-Bañuelos)("In one of my meetings with Governor Madalena, . . . in all the conversations I had with all these entities, that because Congress seemed to be opening the door to a different type of administrative jurisdiction for Valles Caldera,

[123]The Thompson Ridge Fire "burned more than 37 square miles in the Valles Caldera National Preserve after being sparked May 31[, 2013] by a downed power line." Thompson Ridge Fire 100% Contained, Albuquerque J., (July 2, 2013, 5:23 AM), https://www.abqjournal.com/216769/thompson-ridge-fire-100-contained.html.

this was the opportunity for everyone to make their pitch."); Nov. 9 Tr. at 2595:20-2597:2 (Marinelli, Madalena)(recognizing Congress as the only entity who could "deed" the Valles Caldera to Jemez Pueblo and that Senator Bingaman rejected Jemez Pueblo acquisition).

338. Jemez Pueblo made requests to Senator Bingaman and the Honorable Ben Ray Luján, United States Representative from the State of New Mexico, that Congress extend the Quiet Title Act's statute of limitations to permit Jemez Pueblo to further research its aboriginal title claims, and Senator Bingaman ultimately declined to entertain Jemez Pueblo's requests. See, e.g., Dec. 5 Tr. at 5285:4-20 (Silva-Bañuelos)("[Jemez Pueblo counsel Thomas E. Luebben] contacted Senator Bingaman's office, as well as the office of Congressman Ben Ray Lujan, to ask on behalf of Jemez Pueblo if the senator and the congressman would consider introducing legislation to extend the statute of limitations of the Quiet Title Act."); id. at 5286:2-14 (Silva-Bañuelos); Nov. 7 Tr. at 2243:15-2246:9 (Luebben, Madalena)("[W]hen I was governor, I went to the extremes in making sure that we reacquire the Valles Caldera. I went . . . beyond my call of duty to work with the Trust, the Preserve, the Park, the United States, . . . to come to some sort of fruition on what we were asking for.").

339. In 2014, Congress transferred management responsibility for the Valles Caldera from the Valles Caldera Trust to the National Park Service for two primary reasons: (i) to enhance public access given the general public's strong interest to recreate there; and (ii) to protect and preserve the Valles Caldera's archaeological sites and natural and cultural assets. See e.g., Dec. 5 Tr. at 5270:21-5271:5 (Silva-Bañuelos)("[W]e ended up landing on the Park Service . . . given the significant interest by the general public to use and access and recreate on the Preserve, as well as our understanding of the wealth of archaeological sites and natural and cultural values that the

Preserve had."), id. at 5320:1-19 (Silva-Bañuelos)(asserting that, during Congressional consultation about the Valles Caldera transfer, many Tribes desired legislation that would protect the Valles Caldera's fish, wildlife, and watershed resources as well as its historical, cultural, and archaeological values, and other groups expressed similar concern for protecting such resources, including hunting organizations and environmental organizations); id. at 5330:11-5331:16 (Marinelli, Silva-Bañuelos)(describing how the Valles Caldera Trust raffled hunting access to the Valles Caldera through a lottery system, which led to the impression that wealthy hunters had an advantage given the number of tickets they could purchase).

340. Upon assuming management, the Valles Caldera Trust implemented a closure order over the entire Valles Caldera and thereafter gradually opened discrete areas to the public for specific activities while leaving the remaining lands closed to public access; National Park Service management takes an opposite approach -- the entire Valles Caldera is open for non-motorized, public access on foot unless the National Park Service closes a specific area or prohibits a specific activity. See, e.g., Dec. 5 Tr. at 5316:3-5317:8 (Marinelli, Silva-Bañuelos); Backcountry Access, Valles Caldera, National Park Service, https://www.nps.gov/vall/planyourvisit/backcountry-access.htm (last visited June 6, 2018).

341. In addition to Jemez Pueblo, the Pueblos of Santa Clara, Zia, Cochiti, San Felipe, Santo Domingo, Ohkay Owingeh, San Ildefonso, and Jicarilla Apache[124] consulted Congress on

[124]Jemez Pueblo asks the Court to find that "[t]here is no evidence in the record of actual use of the Claim Area by the Jicarilla Apache Nation." Jemez Pueblo's Proposed Findings ¶ 647, at 203 (citing Dec. 3 Tr. at 4979:22-4980:21 (Anschuetz)). The record includes, however, numerous references to Jicarilla Apache's historic Valles Caldera use. See, e.g., Oct. 31 Tr. at 617:2-619:9 (Liebmann)(describing archaeological evidence which establishes that Jicarilla Apache made the Valles Caldera a dangerous place for Pueblos into the early twentieth century);

the proposed Valles Caldera National Preserve transfer legislation, and discussed their historical, traditional, and cultural uses of the Valles Caldera. See, e.g., Dec. 5 at 5256:23-5257:8 (Marinelli, Silva-Bañuelos)(discussing "extensive" consultations with Pueblos regarding the Valles Caldera while Silva-Bañuelos worked for the Senate Energy and Natural Resources Committee); id. at 5276:7-25 (Silva-Bañuelos)(discussing meetings with multiple Tribes regarding the National Park Service transition).

342. The eight Tribes that consulted with Congress regarding the Valles Caldera transfer to the National Park Service expressed interest in maintaining their connections to the land and in the Valles Caldera's management, including future Tribal consultation requirements and how the National Park Service would conduct Tribal access, for which Congress provided in the ultimate transfer legislation. See, e.g., Dec. 5 at 5262:10-17 (Marinelli, Silva-Bañuelos)("My general take-away that influenced my impressions and understanding of Santa Ana's interest in the Valles Caldera was that it was a place of strong meaning and cultural connection, and they were interested in improving the management of the Preserve."); id. at 5262:21-5263:1 (Marinelli, Silva-Bañuelos)("San Felipe also expressed cultural connections and ties to Valles Caldera that I took away with, of their continued interest."); id. at 5263:5-8 (Marinelli, Silva-Bañuelos)("My take-away from the meetings with Sandia Pueblo were that they had an interest in Valles Caldera and a cultural connection to it."); id. at 5263:9-17 (Marinelli, Silva-Bañuelos)("My take-away was there were ancestral use sites, shrines, other cultural archaeological sites that were of interest to [Cochiti

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Valle Grande at 16 ("The Valles Caldera falls within the traditional lands of many of the pueblos surrounding the Jemez Mountains. . . . Jicarilla Apache people often used the caldera for hunting grounds."). The Court, therefore, will not adopt the proposed fact.

Pueblo] and their preservation and protection."); id. at 5263:18-5264:3 (Marinelli, Silva-Bañuelos)("[Zia Pueblo] definitely expressed strong interest in ceremonial religious cultural connections to the Preserve. They were interested in access issues and management issues by the Trust."); id. at 5264:4-11 (Marinelli, Silva-Bañuelos)("Similar cultural connections, deep ties to the Preserve, strong interest in management and access issues at the Preserve under the Valles Caldera Trust. That was the early, early consultation meetings I had with Jemez Pueblo."); id. at 5264:13-25 (Marinelli, Silva-Bañuelos)("My take-away was [Jicarilla Apache] had a cultural tie with Valles Caldera historically, and they were keenly interested in the management of the Valles Caldera Trust."); id. at 5287:10-5288:4 (discussing meetings with the Pueblos of San Ildefonso, Jemez, and Santa Clara regarding the National Park Service transition); id. at 5289:2-6 (Silva-Bañuelos)(discussing the effects that the Tribes' concerns had on the ultimate transfer legislation), id. at 5301:3-10 (Silva-Bañuelos)("They were all interested in making sure that there was teeth behind how the National Park Service would engage with various tribes. The term that I hear a lot is the idea of meaningful consultation. That it's not just check the box type of exercise.").

343. In rejecting Jemez Pueblo's request that Congress transfer the Valles Caldera to Jemez Pueblo, the Honorable Thomas Udall, United States Senator from the State of New Mexico, expressed to Jemez Pueblo other Pueblos' concerns with Jemez Pueblo controlling the Valles Caldera. See, e.g., Nov. 9 Tr. at 2615:24-2616:10 (Marinelli, Madalena)(affirming Senator Udall's position that other Pueblos did not support Jemez Pueblo controlling the Valles Caldera's management); Email from Vincent Toya to Governor Madalena Regarding Meeting with Tom Udall at 2 (dated May 15, 2014), admitted November 9, 2018, at trial as United States' Ex. DX-

UQ (memorializing Senator Udall's comment that "[o]ther pueblos are concern[ed] with [Jemez Pueblo] only controlling the management of the Valles Caldera").

344. On June 30, 2010, the Pueblos of Jemez, Santa Clara, and San Ildefonso provided testimony to Congress in which Santa Clara Pueblo and San Ildefonso Pueblo expressed full support for the Valles Caldera's transfer to the National Park Service; Jemez Pueblo offered conditional support and, for the first time before Congress, asserted its aboriginal title claim to those lands. See, e.g., Nov. 9 Tr. at 2636:13-2637:2 (Marinelli, Madalena)(affirming that Jemez Pueblo "clearly stated" to Congress in 2010 -- but not in 2000 -- its belief that it holds aboriginal title to the Valles Caldera); Dec. 5 Tr. at 5306:1-11 (Silva-Bañuelos)("Jemez Pueblo offered their conditional support to the legislation; Santa Clara Pueblo testified in full support of the legislation; and San Ildefonso testified in their written testimony in full support of the National Park Service management of the Preserve."); Hearing before Comm. on Energy and Natural Res., United States Senate, A Bill to Designate the Valles Caldera Nat'l Preserve as a Unit of the Nat'l Park System, 111th Cong. 753 at 19-21, 22-23, 64-65 (June 30, 2010), admitted October 29, 2018, at trial as United States' Ex. DX-LR.

345. Jemez Pueblo was more familiar than other Tribes with the Valles Caldera's Tribal Access and Use Policy during the Valles Caldera Trust era, because a Jemez Pueblo member drafted the policy, and because Jemez Pueblo had Tribal members on the Valles Caldera Trust board. See, e.g., Dec. 5 Tr. at 5325:9-5326:6 (Marinelli, Silva-Bañuelos)(asserting that Santo Domingo Pueblo and Zia Pueblo were not familiar with the Valles Caldera Tribal Access and Use Policy when the National Park Service assumed the Valles Caldera's management); id. at 5326:11-17 (Silva-Bañuelos)("We ended up meeting with the lieutenant governor of Santo Domingo

Pueblo, Kewa Pueblo. And he really didn't know when he asked us who we were . . . and we explained we're here from the Valles Caldera National Preserve, and he was unfamiliar with that name for the Caldera for the Preserve."); id. at 5327:18-25 (Silva-Bañuelos)("[H]aving a member of [Jemez Pueblo] tribe, having helped develop that Tribal Access and Use Policy, probably provided them with some intimate knowledge of how that worked. Having Board members seated on the Valles Caldera Board of Trustees also provided a level of knowledge and awareness.").

346. Tribes other than Jemez Pueblo, in conformance with their privacy values, would not typically provide the Valles Caldera Trust or the National Park Service with a list of the sacred locations that they would visit within the Valles Caldera. See, e.g., Dec. 3 Tr. at 5118:15-5119:9 (Marinelli, Chavarria)(asserting that Santa Clara Pueblo would not provide the Valles Caldera Trust's Executive Director with information regarding the specific cultural purposes for which Santa Clara Pueblo would request Valles Caldera access); id. at 5141:19-5142:20 (West, Chavarria)(asserting that Santa Clara Pueblo made oral Valles Caldera access requests through Dennis Trujillo, the Valles Caldera Trust's Executive Director, so as to avoid the requirement to disclose in writing Santa Clara Pueblo's traditional cultural activities within the Valles Caldera); Dec. 5 Tr. at 5345:20-5346:25 (Silva-Bañuelos)("[B]ecause I inherited the previous executive director's phone number . . . I would get . . . random phone calls . . . asking for access to the Preserve for traditional tribal reasons. . . . And I would just grant them the access. Probably not really even knowing which tribe they were from. . . . That's . . . how it was customarily being done."); Anschuetz Report at 164 ("[T]he disclosure of the locations of sacred shrines and sites is forbidden.").

13. Many Tribes Continue to Maintain Interests in the Valles Caldera.

347. Many Tribes use the Valles Caldera in overlapping ways that have transformed the Valles Caldera into a commons. See, e.g, Anschuetz Report at 61 ("Today, many Rio Grande Pueblo communities, including Jemez, Zia, Santa Ana, San Felipe, Cochiti, Santo Domingo, Tesuque, San Ildefonso, Santa Clara, and San Juan, maintain associations with the area now contained within the VCNP."); id. at 201 ("The people of Santa Clara have had a long and intimate relationship with the Valles Caldera stretch back in time immemorial, and have used and occupied the Caldera, for many traditional subsistence and cultural purposes, throughout the time and up to the present." (quoting Santa Clara Pueblo Governor J. Michal Chavarria)); id. at 202 ("We've learned this history from our ancestors and our elders, and we continue to use the Valles Caldera for cultural purposes as we have done since time immemorial." (quoting Zia Pueblo member Jerome Lucero)).

348. All Tewa Pueblos maintain strong associations with the Jemez Mountains as their mountains of cardinal direction. See, e.g., Dec. 3 Tr. at 5119:10-25 (Marinelli, Chavarria)(asserting that the Tewa aboriginal boundaries' western edge is the Jemez Mountains, which includes Redondo Peak); Anschuetz Report at 150-51.

Pueblo	**Valles Rhyolite Obsidian (Cerro del Medio)**	**Piki Stone Quarry** [redacted]	**Redondo Peak**
San Ildefonso	18.8	19.1	25.0
Santa Clara	20.5	20.0	27.2
Cochiti	21.8	24.8	21.8
Ohkay Owingeh (San Juan)	23.2	22.0	30.2

Pojoaque	24.0	24.2	30.3
Jemez Pueblo	25.9	28.5	20.0
Nambe	26.5	26.7	32.8
Tesuque	27.6	28.5	33.2
Kewa (Santo Domingo)	28.0	31.0	27.0
Zia	32.0	34.8	26.7
San Felipe	32.7	35.7	30.4
Santa Ana	34.7	37.8	30.6

Table 1. Distance in Miles from Surrounding Pueblos to Places within the Valles Caldera

A. Santa Clara Pueblo's Interests in the Valles Caldera.

349. Santa Clara Pueblo views the Valles Caldera as a commons that no single Pueblo or Tribe owns. See, e.g., Dec. 5 Tr. at 5202:4-14 (Marinelli, Chavarria)(asserting that the lands west of Santa Clara's headwaters in the Valles Caldera are "used in a shared concept"); Interview Notes with Porter Swentzell by Kurt F. Anschuetz, Ph.D.[125] at 11 (dated 2011), admitted October

[125]Jemez Pueblo asks the Court to find that "multiple members of Santa Clara Pueblo described the pueblo's traditional use areas as outside of the Claim Area" based, in part, on Anschuetz' interview with Swentzell, in which, according to Jemez Pueblo,

> Swentzell, describes water as an essential cultural resource and for the Pueblo communities there is an "incredible focus on water . . . . It is just the center of who we are." . . . Mr. Swentzell explains "[w]atersheds are much more understandable as boundaries . . . than these political lines." . . . Mr. Swentzell identifies the relationship between the Pueblo of Santa Clara and Santa Clara Canyon, which is outside of the Claim Area. . . . Mr. Swentzell talks about spending several summers on his family's traditional farmland in Santa Clara Canyon near Santa Clara's ancestral village of Puye and talks about cutting wood with his family in Santa Clara Canyon. . . . All these areas are outside of the Claim Area.

Jemez Pueblo's Proposed Findings ¶ 599, at 186-87 (quoting Managing Multi-Cultural Landscapes at 489; and citing id. at 171; id. at 410). The Court concludes that Swentzell's statements indicate merely that Santa Clara Pueblo has sacred, traditional use areas outside the Valles Caldera. The

29, 2011, at trial as United States' Ex. DX-MI ("The custom is that nobody owns the Valles exclusively, and that there is respect for others when they are there too. Many communities in the area would go to the Valles and gather resources and pray. Nobody can stake out claims to the exclusion of others."); Anschuetz Report at 201-02.

350. Santa Clara Pueblo's trust lands are adjacent to the Valles Caldera, and Santa Clara Pueblo maintains many sites, trails, and shrines within the Valles Caldera.[126] See, e.g., Dec. 3 Tr.

Court notes that Swentzell elsewhere in the same report discusses Santa Clara Pueblo's relationship with the Valles Caldera:

> [Swentzell] closes his discussion by sharing his thoughts about the uses of the VCNP and the relationships that he has experienced between members of his community and the managers of the Bandelier National Monument and the VCNP. He emphasizes the needs for communication and engagement based on respect and trust that do not ask Tribes to divulge culturally sensitive information.

Managing Multi-Cultural Landscapes at 173. See also Interview Notes with Porter Swentzell by Kurt F. Anschuetz, Ph.D. at 11 ("The custom is that nobody owns the Valles exclusively, and that there is respect for others when they are there too. Many communities in the area would go to the Valles and gather resources and pray. Nobody can stake out claims to the exclusion of others.") The Court, therefore, will not adopt the proposed fact.

[126]Jemez Pueblo asks the Court to find that, "[a]t trial, Dr. Anschuetz confirmed that Santa Clara's traditional use area is the Santa Clara Creek Canyon and surrounding vicinity outside of the Claim Area. . . . Dr. Anscheutz's explains that his understanding of Santa Clara's use of the Valles Caldera prior to 2007 came from his interview of Mr. Cajete," who, according to Jemez Pueblo,

> "reports that Santa Clara Pueblo was able to maintain its claim to the Santa Clara Canyon watershed, in part, because of the continuity in its farming traditions in the canyon." [Managing Multi-Cultural Landscapes at 448.] Mr. Cajete explains that each community defines its "preferential use area in terms of its own unique watersheds." [Managing Multi-Cultural Landscapes at 488.] Santa Clara focused much "of its activity within a 5- to 10-mile-wide strip, which extended up the canyon from the edge of the Rio Grande Valley to the Valles Caldera," and is outside of the Claim Area. [Managing Multi-Cultural Landscapes at 448.] Mr. Cajete refers to Santa Clara Creek Canyon, which is outside of the Claim Area, as

at 5044:23-5045:2 (Chavarria)("The activities of our people are of a sensitive and religious nature such that details cannot be divulged, but it is fair to say that the area is part of our cultural sanctuary,

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> "the core of his Pueblo's traditional homeland." [Managing Multi-Cultural Landscapes at 411.] Mr. Cajete discusses spending several summers in Santa Clara Creek Canyon, "'our place'" and mentions Puye, but again both are outside of the Claim Area. [Managing Multi-Cultural Landscapes at 411.] Mr. Cajete "re-stresses that the Santa Clara Canyon watershed", which is outside the Claim Area, "is very important to his Pueblo" and that "for all of the community, the [Santa] Clara Canyon was the place where you 're-created.'" [Managing Multi-Cultural Landscapes at 456.] When Mr. Cajete discusses the VCNP he states that Santa Clara has not had "'very much contact'" with the VCNP except for when Santa Clara was working to reacquire the upper watershed of the Santa Clara Canyon at the time the U.S. was negotiating with the Dunigans. [Managing Multi-Cultural Landscapes at 398-99.]

Jemez Pueblo's Proposed Findings ¶¶ 599-600, at 188-89 (citing Nov. 29 Tr. at 4604:6-23 (Anschuetz); id. at 4606:10-15 (Anschuetz); Managing Multi-Cultural Landscapes at 112). The cited support, however, confirms neither that Anschuetz limited Santa Clara Pueblo's traditional use area to the Santa Clara Creek Canyon and area outside the Valles Caldera, nor that Anschuetz based his assertions regarding Santa Clara Pueblo's Valles Caldera use before 2007 exclusively on his interview with Cajate. See, e.g., Nov. 29 Tr. at 4604:6-23 (Anschuetz)("Santa Clara Creek is the major thoroughfare that members of the Pueblo and other people historically used to go into the heart of the Jemez Mountains, if they were going to Jemez, or they're going to Cuba, or . . . to Abiquiu or Canon."); id. at 4606:10-15 (Anschuetz)("My interview with Dr. Cajete was telling me that members of Santa Clara Pueblo were actively using the Valles Caldera in the Baca location."). Moreover, Cajete's statements do not negate Santa Clara Pueblo's connection to the Valles Caldera, which Cajete discusses elsewhere in the same report to which Jemez Pueblo directs the Court:

> Cajete talks about how people will tend to view the Valles Caldera from the perspective of their community's particular pathway. This pathway is what lends itself to "intimacy" and "orientation" . . . . These observations underscore the need for land managers to remember that each community affiliated with the Jemez Mountains has different cultural historical experiences and needs. To reduce these individual experiences into some coarse generalization ignores important sources of variability and can result in the severing of essential relationship.

Managing Multi-Cultural Landscapes at 112 (quoting Gregory Cajete). The Court, therefore, will not adopt the proposed fact.

our pharmacy, and our grocery store."); Hearing before Comm. on Energy and Natural Res., United States Senate, A Bill to Designate the Valles Caldera Nat'l Preserve as a Unit of the Nat'l Park System at 26 ("The many traditional sites, trails, shrines, and ritual gatherings, areas throughout the caldera remain vitally important and integrally related to our traditional religious practices."); Santa Clara Restoration Assessment at 25.

351. Congress has acted to protect Santa Clara Pueblo's continuing interest in the Valles Caldera's management. See, e.g., Nat'l Def. Auth. Act for Fiscal Year 2015 § 3043(b)(3)(C)(iii), 128 Stat. 3292, 3793 (dated Dec. 19, 2014); Preservation Act, 114 Stat. 598, 610 (2000) ("The Trust is authorized and directed to cooperate and consult with Indian tribes and Pueblos on management policies and practices for the Preserve which may affect them.").

352. Santa Clara Pueblo began consulting with the Valles Caldera Trust in 2002 and shortly thereafter hosted one of the first Valles Caldera Trust meetings. See, e.g., Minutes of Valles Caldera Trust Meeting at 1 (dated Feb. 28, 2002), admitted December 5, 2018, at trial as United States' Ex. DX-IW; Notes of Santa Clara Tribal Consultation Meeting (March 5, 2002), admitted December 3, 2018, at trial as United States' Ex. DX-IX (summarizing meeting to discuss Valles Caldera hunting and grazing activities, among other topics).

353. Santa Clara Pueblo continues to consult with the National Park Service regarding issues related to Valles Caldera access, use, and preservation.[127] See, e.g., Nov. 13 Tr. at 2943:11-

[127]Jemez Pueblo asks the Court to find that, "[i]n its consultations with the Preserve, Santa Clara's concerns most often concerned the northeastern corner of the VCNP and Santa Clara's easement area." Jemez Pueblo's Proposed Findings ¶ 607, at 192 (citing Dec. 3 Tr. at 5175:9-5179:7 (Marinelli, Chavarria); Notes of Santa Clara Tribal Consultation Meeting). The record before the Court, however, does not support this proposed fact. See e.g., Nov. 13 Tr. at 2968:1-2972:23 (Steffen)(asserting that an October 25, 2010, meeting with Santa Clara Pueblo addressed

23 (Steffen)(asserting that Santa Clara Pueblo has conducted consultation meetings with National Park Service staff); id. at 2968:1-2972:23 (Steffen)(asserting that an October 25, 2010, meeting with Santa Clara Pueblo addressed multiple projects, opposed certain access, and sought co-management); Dec. 3 Tr. at 5143:10-5144:14 (Marinelli, Chavarria)(affirming that Santa Clara Pueblo has discussed its Valles Caldera "stewardship and collaborative efforts" with National Park Service archaeologists); Notes from East Jemez Resource Council Meeting at 1 (dated Dec. 14, 2005), admitted November 13, 2018, at trial as United States' Ex. DX-KK (describing consultation regarding the Valles Caldera's main north-south road); Letter from D. Trujillo to Gov. Chavarria, Santa Clara (dated Feb. 3, 2006), admitted October 29, 2018, at trial as United States' Ex. DX-KN (affirming Santa Clara Pueblo's Valles Caldera consultation schedule).

354. Santa Clara Pueblo has expressed to the United States concerns regarding the Valles Caldera's main entrance, main north-south artery, high elevation areas, land formations, hiking trails, hunting and parking policies, and geothermal development. See, e.g., Nov. 13 Tr. at 2945:3-2951:2 (Marinelli, Steffen)(detailing the topics that Santa Clara Pueblo discussed at its 2006 annual consultation meeting with Valles Caldera Trust employees); Notes of Meeting: Santa Clara Pueblo Annual Consultation Meeting at 1-5 (dated June 26, 2006), admitted October 29, 2018, at trial as United States' Ex. DX-KP.

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multiple projects, opposed certain access, and sought co-management); Minutes of Valles Caldera Trust Meeting at 1 (summarizing meeting to discuss Valles Caldera hunting and grazing activities, among other topics); Notes from East Jemez Resource Council Meeting at 1 (describing consultation regarding the Valles Caldera's main north-south road); Valles Caldera National Transition Consultation at 2-3 ("We need to preserve caldera for generations. Enter into co-op agreement, management plan . . . . The caldera is an essential part of daily landscape -- hunting and ceremonies."). The Court, therefore, will not adopt the proposed fact.

355. On April 23, 2015, at a multi-tribe consultation meeting regarding the Valles Caldera's transition to the National Park Service, Santa Clara Pueblo asserted its ongoing connection to and reliance on the Valles Caldera's natural resources.[128] See, e.g., Valles Caldera National Preserve Management Act Tribal Consultation with Santa Clara at 1 (April 23, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-ON ("The Pueblo people of Santa Clara have utilized the Caldera for thousands of years. It is our cultural sanctuary, our grocery store, our pharmacy, it is our life line."); id. at 2 ("We consider the Caldera to be an essential part of our cultural landscape and daily life. . . . Traditional hunting in the Caldera has been done by Santa Clara since time immemorial and is a tradition that is still practiced to this day and these

[128]Jemez Pueblo asks the Court to find:

> Santa Clara released its interest in the Claim Area during the ICC litigation brought in the 1950s. As part of the stipulation for entry of final judgment in 1988, Santa Clara agreed to dismiss with prejudice all of its claims in the suit, terminating forever any claims that it had to lands that it had alleged as aboriginal outside the boarders of their Shoestring Grant lands in the 1905 reservation, which implicitly included the 4,900 acres that the Pueblo claimed within the Baca Location No. 1 Grant before the ICC.

Jemez Pueblo's Proposed Findings ¶ 608, at 192 (citing History of the Boundary Between the Baca Location No. 1 Grant and Santa Clara Pueblo at 10; Map of Santa Clara Aboriginal Claimed Area, ICC Doc. 356, at 1; Stipulation for Entry of Final Judgment, Santa Clara, Dkt. 356). Similar to the Court's conclusion regarding Jemez Pueblo's ICC stipulation, see Pueblo of Jemez v. United States, Oct. 25 MOO at 119 n.39, 350 F. Supp. 3d at 1119 n.39, the Court concludes that Santa Clara Pueblo's ICC stipulation does not provide sufficient precedential value for the Court to find that Santa Clara Pueblo released for all time its interests in the Valles Caldera, which Santa Clara Pueblo insists is a commons over which no Tribe can claim exclusive ownership rights. see, e.g., Dec. 5 Tr. at 5202:4-14 (Marinelli, Chavarria)(asserting that the lands west of Santa Clara's headwaters in the Valles Caldera are "used in a shared concept"); Interview Notes with Porter Swentzell by Kurt F. Anschuetz, Ph.D. at 11 (dated 2011), admitted October 29, 2011, at trial as United States' Ex. DX-MI ("The custom is that nobody owns the Valles exclusively, and that there is respect for others when they are there too. Many communities in the area would go to the Valles and gather resources and pray. Nobody can stake out claims to the exclusion of others."); Anschuetz Report at 201-02.

cultural activities will continue."[129]); Valles Caldera National Preserve Transition to the National Park Service Consultation at 2 (dated April 23, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-OO ("Management of the caldera is of great interest to [Santa Clara Pueblo]. Caldera is an essential part of their traditional cultural landscape: collection of plants, other materials, ceremonies. Protection of tribal and religious sites needs improvement, and they are concerned about trespass and encroachment on their easement by VCNP visitors."); Valles Caldera National Transition Consultation at 2-3 (dated April 23, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-OQ ("We need to preserve caldera for generations. Enter into co-op agreement, management plan . . . The caldera is an essential part of daily landscape -- hunting and ceremonies. We are concerned about trespass from visitors onto our lands. We need to preserve cultural resources.").

[129] [redacted] See, e.g., Dec. 3 Tr. at 5103:15-17 (Chavarria); id. at 5104:3-5108:14 (Chavarria) [redacted]; id. at 5109:15-5110:22 (Chavarria) [redacted]); id. at 5111:9-5112:14 (Marinelli, Chavarria) [redacted]); Valles Caldera National Preserve Map (undated), admitted December 3, 2018, at trial as United States' Ex. DX-VG ([redacted]). [redacted] See, e.g., Dec. 3 Tr. at 5110:10-22 (Marinelli, Chavarria); id. at 5112:7-14 (Marinelli, Chavarria). In addition, Santa Clara elder Tito Naranjo used the Valles Caldera through 2005 to hunt, fish, hike, collect mushrooms and plants, and for other cultural purposes. See, e.g., Nov. 29 Tr. at 4606:16-4615:8 (Marinelli, Anschuetz); Interview Notes with Tito Naranjo by Kurt F. Anschuetz, Ph.D. at 5-7.

356. On December 1, 2015, in a session to develop a foundational document for the Valles Caldera, Santa Clara Pueblo stated that it uses the Valles Caldera to gather traditional medicinal and ceremonial plants, and other cultural resources, including minerals, game animals, obsidian, water and trees, and to conduct pilgrimages to certain mountains, springs, and shrines.[130] See, e.g., Santa Clara Pueblo Dec. 2015 Talking Points at 1 (dated Dec. 1, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-PD ("[Santa Clara Pueblo's Valles Caldera] use has included and still includes traditional gathering of medicinal and ceremonial plants and other cultural resources (mineral paint, game animals, obsidian, ceremonial uses of water and trees). Hunting in the Caldera is a traditional activity that is still practiced to this day."); Valles Caldera National Preserve (VALL) Foundation Document Tribal Listening Session Meeting Notes at 1-2 (dated Dec. 1, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-PG ("Santa Clara has a common boundary with [the Valles Caldera]. For 1000s of years, we have used the caldera. There are activities we can't change or divulge. We conduct sacred activities. . . . We

[130]Ferguson, based on his work with Santa Clara Pueblo, found credible Santa Clara Pueblo's assertion that Santa Clara Pueblo's ancestors gathered plants and resources from and dwelled and performed cultural activities in the Valles Caldera. Ferguson also interpreted Santa Clara Pueblo's Valles Caldera description as a "cultural and spiritual sanctuary" to suggest that Santa Clara Pueblo attaches great spiritual value to at least some portion of the Valles Caldera. Nov. 6 Tr. at 1980:1-20 (Marinelli, Ferguson). See also id. at 1983:19-1989:6 (Marinelli, Ferguson); Santa Clara Res. No. 2016-129 at 1-2. In addition, Ferguson credited the Santa Clara Pueblo Cultural Committee's statements that Santa Clara members: (i) made pilgrimages to multiple mountains in the Preserve lands in earlier times; (ii) continue to collect medicinal plants from the Valles Caldera; and (iii) collected plants and hunted animals for food in the Valles Caldera. See, e.g., Nov. 6 Tr. at 1991:3-1992:24 (Marinelli, Ferguson); Santa Clara Res. No. 2016-129 at 3-4.

will continue to use areas of the caldera. We can't say where. We will not provide specific information.").

357. Santa Clara Pueblo members travel past Santa Clara Creek's headwaters to make religious and cultural pilgrimages into the Valles Caldera.[131] See, e.g., Dec. 3 Tr. at 5118:15-5119:9 (Marinelli, Chavarria)(asserting that Santa Clara Pueblo requested Valles Caldera access on "an as-needed basis, like two to three times a year" during J. Michael Chavarria's eight terms as Santa Clara Pueblo governor); Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 1 (Dec. 16, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-QG ("[T]he Santa Clara Pueblo people have used the Valle Caldera for hundreds of years for cultural activities, and continue to use the Valle Caldera for such activities, including traditional gathering of

[131]Jemez Pueblo asks the Court to find that, "[w]hen speaking about using the 'Valles Caldera,' Santa Clara members could be and often are referring to the Santa Clara Creek Canyon that is in the northeastern part of the Caldera outside of the rim." Jemez Pueblo's Proposed Findings ¶ 597, at 186 (citing Dec. 3 Tr. at 5105:12-24 (Chavarria); VCNP Land Use History at 3; Designation of Deposition Testimony -- Joseph Toya at 118-121:5-16 (J. Toya); id. at 105-107:18-2 (J. Toya)). The cited evidence does not support this fact. See, e.g., Dec. 3 Tr. at 5105:12-24 (Chavarria)(discussing Santa Clara Pueblo's reservation boundaries before and after 2000); VCNP Land Use History at 3 (depicting the Valles Caldera and Santa Clara Creek); Designation of Deposition Testimony -- Joseph Toya at 118:5-121:16 (J. Toya)(discussing Toya's understanding of Santa Clara Pueblo's Valles Caldera use in the 1960s); id. at 105:18-107:2 (J. Toya)(discussing Toya's understanding of Santa Clara Pueblo's religious practices in Valles Caldera, which Toya learned about from classmates in the 1960s)). Moreover, the Court concludes that Santa Clara Pueblo's testimony regarding the Valles Caldera refers to the lands at issue in this case and not the lands that it purchased in 2000. See, e.g., Dec. 3 Tr. at 5118:15-5119:9 (Marinelli, Chavarria)(asserting that Santa Clara Pueblo requested Valles Caldera access from Valles Caldera National Preserve staff on "an as-needed basis, like two to three times a year" during J. Michael Chavarria's eight terms as Santa Clara Pueblo governor); Anschuetz Report at 165 ("Santa Clara Pueblo Governor J. Michael Chavarria notes that members of his Pueblo also harvest water from the upper Jemez River watershed 'for traditional purposes in connection with their uses of sites and areas in the Caldera.'" (quoting J. Michael Chavarria)). The Court, therefore, will not adopt the proposed fact.

medicinal and ceremonial plants and other cultural resources, and is the Pueblo's cultural and spiritual sanctuary, ..."); Anschuetz Report at 165 ("Santa Clara Pueblo Governor J. Michael Chavarria notes that members of his Pueblo also harvest water from the upper Jemez River watershed 'for traditional purposes in connection with their uses of sites and areas in the Caldera.'" (quoting J. Michael Chavarria)).

358. Santa Clara Pueblo maintains an oral tradition that includes Valles Caldera place names[132] and emphasizes Valles Caldera stewardship. See, e.g., Nov. 29 Tr. at 4500:19-4501:8 (Anschuetz, Marinelli)(asserting that Santa Clara Pueblo's and Zia Pueblo's Valles Caldera place names are "privileged information"); Valles Caldera National Preserve Transition to the National Park Service Consultation at 2 ("James Naranjo, Lt. Gov. Pueblo of Santa Clara . . . speaking Tewa, mentions [redacted] (*ancestral pueblo sites*), switches to English. . . . They too have names for mountains, like their neighbors, and the caldera is in their hearts." (emphasis in original)).

359. Santa Clara Pueblo meets with the Valles Caldera National Preserve Superintendent one to three times a year on average to discuss Santa Clara Pueblo's requests for co-management

[132]Ferguson asserted that an expert anthropologist "could make the assumption" that Santa Clara Pueblo has place names within the Valles Caldera because [redacted] Nov. 6 Tr. at 1999:17-25 (Marinelli, Ferguson). Moreover, Ferguson "would expect" Santa Clara Pueblo to have a place name for its travel route to [redacted] Nov. 7 Tr. at 2103:19-2108:20 (Marinelli, Ferguson)(discussing Santa Clara Pueblo's historic Obsidian Valley use). See Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 1 ("[T]he Santa Clara Pueblo people have used the Valle Caldera for hundreds of years for cultural activities, and continue to use the Valle Caldera for such activities, including traditional gathering of medicinal and ceremonial plants and other cultural resources, and is the Pueblo's cultural and spiritual sanctuary . . . .").

and collaboration on Valles Caldera matters. See, e.g., Dec. 3 Tr. at 5118:15-5119:9 (Marinelli, Chavarria); Dec. 5 Tr. at 5348:3-15 (Marinelli, Silva-Bañuelos); id. at 5354:24-5355:9 (Marinelli, Silva-Bañuelos)(asserting that Santa Clara Pueblo is "in the category with just a handful of tribes of very consistently engaged with Valles Caldera, consistent in their requests for co-management and ways that they can work . . . on a more collaborative basis").

360. Santa Clara is developing a multi-year funding agreement with the National Park Service to enable Santa Clara Pueblo to engage in more Valles Caldera projects, including maintenance and ecological restoration. See, e.g., at Dec. 5 Tr. at 5354:24-5355:9 (Marinelli, Silva-Bañuelos); Letter from Jorge Silva-Bañuelos to Governor J. Michael Chavarria at 1 (Sept. 16, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-QD ("This letter is in response to your request to enter into annual funding agreement negotiations for self-governance compacting with the Pueblo of Santa Clara for certain programs, services, functions, and activities at Valles Caldera National Preserve."); Santa Clara Pueblo Dec. 2015 Talking Points at 2 ("Ensuring [National Park Service] . . . enters into a cooperative agreement with Santa Clara Pueblo for co-management of certain areas within the VCNP adjacent to the Santa Clara Pueblo boundary to implement hazardous fuel reduction treatments, ecological restoration, watershed protection, wildlife habitat enhancement, and cultural resource protection.").

361. Santa Clara Pueblo acknowledges that many Pueblos and Tribes maintain connections to the Valles Caldera. See, e.g., Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 1 ("[O]ther tribes have also used the Valle Caldera for traditional activities and continue such use, and no permission has ever been required or obtained by any tribe to access locations in the Valle Caldera . . . ."); Meeting Summary -- Valles Caldera Trust Meeting in Public

(dated Jan. 27, 2010), admitted October 29, 2018, at trial as United States' Ex. DX-LM (noting that Santa Clara Pueblo Tribal Historic Preservation Officer[133] Ben Chavarria "commented that many regional tribes (as far away as Oklahoma and Arizona) care about the Preserve and the Trust needs to find venues to work with all of them"[134]).

362. Santa Clara Pueblo's Bear Society regularly visits the Valles Caldera to collect medicinal plants and obsidian. See, e.g., Nov. 29 Tr. at 4527:7-4528:3 (Anschuetz)("Osha[135] . . . can occur below 8,500 feet; it can occur below 9,000 feet, but the larger quantities, reliable stands of osha don't exist until you get above 9,000 feet."); id. at 4608:9-4609:8 (Marinelli, Anschuetz)(affirming that the Santa Clara Pueblo Bear Society visits the Valles Caldera to collect

[133]"Tribal Historic Preservation Officers [THPO] are officially designated by a federally-recognized Indian tribe to direct a program approved by the National Park Service and the THPO must have assumed some or all of the functions of State Historic Preservation Officers on Tribal lands." WHAT ARE TRIBAL HISTORIC PRESERVATION OFFICERS?, National Association of Tribal Historic Preservation Officers, https://www.nathpo.org/thpos/what-are-thpos/ (last visited June 12, 2019). "State Historic Preservation Officers (SHPO) play a critical role carrying out many responsibilities in historic preservation. Surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register is one such key activity." State Historic Preservation Offices, National Park Service, https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm (last visited June 29, 2019)

[134]Chavarria made these comments while representing a group called Los Amigos de Valles Caldera, the stated purpose of which is "to support the Valles Caldera National Preserve for present and future generations through outreach, education, restoration, and collaboration." About us, Los Amigos de Valles Caldera, http://losamigosdevallescaldera.org/about-losamigos/ (last visited June 18, 2019).

[135]"Ligusticum porteri, known as Osha or oshá, is a perennial herb found in parts of the Rocky Mountains and northern Mexico, especially in the southwestern United States." Ligusticum porter, Wikipedia, https://en.wikipedia.org/wiki/Ligusticum_porteri (last visited July 1, 2019). Osha "has many uses in Native American medicine. The Zuni people use an infusion of the root for body aches. The root is also chewed by the medicine man and patient during curing ceremonies for various illnesses, and the crushed root and water used as wash and taken for sore throat." Id.

Osha); Interview Notes with Tito Naranjo by Kurt F. Anschuetz, Ph.D. at 6-7 ("*Osha* grows around the edges of the Valles where the ground is not too boggy. 'It is so rich with *osha* . . . that . . . all the . . . Pueblo people . . . should be allowed to go in whenever they have a need. . . . The Medicine Society is alive and well.' They need *osha* 'all the time.'" (quoting Santa Clara Pueblo member Tito Naranjo)).

363. Santa Clara Pueblo's religious leaders do not permit Santa Clara Pueblo members to discuss Valles Caldera use with specificity. See, e.g., Nov. 29 Tr. at 4501:9-19 (Marinelli, Anschuetz)(affirming that Santa Clara Pueblo and Zia Pueblo members are unwilling to discuss in detail their cultural and religious practices); Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 3 ("The activities of our people are of a sensitive and religious nature such that details cannot be divulged but it is fair to say that the [Valles Caldera] is part of our cultural sanctuary, our pharmacy, and our grocery store.").

364. Although Santa Clara Pueblo has made several written requests to access the Valles Caldera, including for youth gatherings and a project involving ethnographic or anthropological studies, such requests are infrequent, because the Valles Caldera National Preserve Superintendent has informed Santa Clara Pueblo that it need not obtain National Park Service permission to access the Valles Caldera by foot from the boundary that Santa Clara Pueblo and the Valles Caldera share near the Rito de los Indios. See, e.g., Dec. 5 Tr. at 5351:22-5354:23 (Marinelli, Silva-Bañuelos)("We've authorized a youth gathering from Santa Clara Pueblo in 2017, and again this year, in 2018."); id. at 5355:10-24 (Marinelli, Silva-Bañuelos)("It's not frequent that I receive written requests. . . . [I]f they want to come in from the northern boundary, there's a kind of valley

area along what's called the Rito de los Indios. . . . And I've indicated . . . that if they want to come in on foot from that direction, you don't need to ask my permission.").

365. In October, 2016, Santa Clara Pueblo's cultural committee, which preserves Santa Clara Pueblo's cultural knowledge, asked the Santa Clara Pueblo Tribal Council to support the committee's position that no single Pueblo or Tribe owns or controls the Valles Caldera. See, e.g., Dec. 3 Tr. at 5132:6-5133:11 (Marinelli, Chavarria)(describing the cultural committee's request and subsequent Tribal Council resolution); Pueblo of Santa Clara Tribal Council Resolution No. 2016-129 at 1 ("[T]he Santa Clara Pueblo Cultural Committee recommends that the Santa Clara Pueblo not support only one pueblo having exclusive use of the Valles Caldera National Park. . . . [W]e feel that all mountains hold a very important role for many tribes today.").

366. No one Tribe controls the Valles Caldera and surrounding areas. See, e.g., Anschuetz Report at 11-13 ("Considering the proximity of the remnants of large number of big pueblos . . . on the east and northeast flanks of the Jemez Mountains, it is inconceivable that ancestral Keres and Tewa Pueblo peoples would not have had unrestricted access to most, if not all, of the VCNP."); Anschuetz Rebuttal Report at 12 ("Consideration of the concentration of a large number of Tewa people at the settlements of Puye (LA47, with ca. 1,600 rooms) and Pueblo de las Estrellas ([redacted], with ca. 1,600 rooms) in Santa Clara Canyon in the Northern Pajarito archaeological district is also instructive.").

367. Santa Clara Pueblo opposes Jemez Pueblo or any one Pueblo controlling the Valles Caldera. See, e.g., Dec. 3 Tr. at 5132:6-5133:11 (Marinelli, Chavarria)(asserting that the Santa Clara Pueblo Tribal Council "approved the resolution . . . not supporting that only one pueblo having exclusive use of the Caldera"); Pueblo of Santa Clara Tribal Council Resolution No. 2016-

129 at 1 ("The Tribal Council further affirms that no tribe has ever had exclusive use of the Valles Caldera.").

368. Santa Clara Pueblo views its members as Valles Caldera stewards and cultural inheritance trustees who regularly engage in pilgrimages to the Valles Caldera to fulfill their cultural and land stewardship obligations. See, e.g., Dec. 3 Tr. at 5097:2-22 (Chavarria)(discussing Santa Clara Pueblo's forestry and restoration efforts within and near the Valles Caldera); id. at 5120:22-5122:18 (Marinelli, Chavarria)(discussing Santa Clara Pueblo's elk monitoring and beaver restoration efforts); Anschuetz Report at 104 (identifying Santa Clara Pueblo's sacred stewardship obligations).

369. Santa Clara Pueblo worked to protect its Valles Caldera cultural sites during the Cerro Grande Fire[136] and the Las Conchas Fire.[137] See, e.g., Dec. 3 Tr. at 5112:24-5113:6 (Marinelli, Chavarria)(describing Chavarria's role during the Cerro Grande Fire as "to monitor and assist the cultural sites of importance in the Caldera"); id. at 5113:22-5114:21 (Marinelli, Chavarria)(describing the Valles Caldera sites that Chavarria monitored during the Los Conchas).

370. Santa Clara Pueblo members continue to visit Redondo Peak and to harvest Valles Caldera obsidian for use in traditional, sacred ceremonies. See, e.g., Dec. 3 Tr. at 5043:4-5046:16

[136]"The Cerro Grande Fire was a disastrous forest fire in New Mexico . . . that occurred in May 2000. . . . Over 400 families in the town of Los Alamos, New Mexico, lost their homes in the resulting 150,000-acre (190 km² = 75 mi²) fire." Cerro Grande Fire, Wikipedia, https://en.wikipedia.org/wiki/Cerro_Grande_Fire (last visited June 13, 2019).

[137]"The Las Conchas Fire was a wildfire in New Mexico . . . in 2011. The fire started in Santa Fe National Forest and burned more than 150,000 acres, threatening Los Alamos National Laboratory and the town of Los Alamos. . . . [I]t became the largest wildfire in New Mexico state history at the time." Las Conchas Fire, Wikipedia, https://en.wikipedia.org/wiki/Las_Conchas_Fire (last visited June 13, 2019).

(Marinelli, Chavarria)(discussing Santa Clara Pueblo's statement that, as part of its "ongoing relationship" with the Valles Caldera, it gathers obsidian, collects plants, hunts animals, and visits Redondo Peak); Anschuetz Report at 178 ("Santa Clara Pueblo Governor J. Michael Chavarria, reports that his community still uses obsidian -- [redacted] -- gathered during his Pueblo's activities in the VCNP.").

371. In 2017, Santa Clara Pueblo conducted within the Valles Caldera a cultural gathering that emphasized a location from which Santa Clara Pueblo members could view Santa Clara Pueblo's sacred peaks, including Redondo Peak, Cerro Pelado, and Cerro del Medio. See, e.g., Dec. 5 Tr. at 5353:18-5354:23 (Marinelli, Silva-Bañuelos); id. at 5355:25–5357:11 (Marinelli, Silva-Bañuelos)("I observed them pointing at different peaks, and saying how this would work, because all of these various peaks were visible from that location. And that included Redondo Peak; it included Cerro Pelado on the Forest Service side; it included Cerro del Medio; and then some other peaks."); id. at 5354:17-23 (Silva-Bañuelos)("An older woman who . . . was there assisting this youth gathering -- she had mentioned that she had seen this place in her dreams. And there was a lot of emotion. They were both crying when they got to the spot, and they said, 'We've come home.'"); Special Use Permit for VCNP for Santa Clara Pueblo (dated July 30, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-RC.

372. Santa Clara Pueblo supports legislation restricting construction on Redondo Peak and other Valles Caldera peaks, because Santa Clara Pueblo considers those peaks sacred. See, e.g., Dec. 3 Tr. at 5043:14-20 (Marinelli, Chavarria)(discussing Santa Clara Pueblo's statement that it continues to visit Redondo Peak for traditional, cultural purposes); Dec. 5 Tr. at 5283:20-5284:7 (Marinelli, Silva-Bañuelos)(discussing Santa Clara Pueblo's support for legislation that

prohibitis motor vehicle access on Redondo Peak above 10,000 feet); id. at 5284:8-10 (Silva-Bañuelos)("[Santa Clara Pueblo] expressed that all peaks within Valles Caldera were sacred to Santa Clara Pueblo.").

373. Although Santa Clara Pueblo believes that the United States cannot adequately represent Santa Clara Pueblo's interests in this case, it is unwilling to waive its sovereign immunity to join the case as a party.[138] See, e.g., Dec. 3 Tr. at 5135:16-25 (Marinelli, Chavarria); id. at 5136:1-11 (Marinelli, Chavarria).

B. Zia Pueblo's Interests in the Valles Caldera.

374. Zia Pueblo views the Valles Caldera as a large, open-air church. See, e.g., Nov. 30 Tr. at 4718:24-4719:20 (Anschuetz) [redacted] Florence Hawley Ellis and Andrea Ellis-Dodge, Religious Use of the Valles Caldera by Zia and Jemez Pueblos at 45-46 (dated 1981), admitted November 29, 2018, at trial as United States' Ex. DX-EZ ("Valles Caldera Religious Use")([redacted]

[138]The United States notes that it [redacted] See United States' Proposed Findings at 99 n.5 (citing Designation of Deposition Testimony -- Joseph Toya at 102:1-5 (undated), admitted November 20, 2018, at trial as United States' Ex. PX JX-3 [redacted]

[redacted] and that Zia Pueblo member would sometimes "refer to the Caldera as their cathedral").

375. Zia Pueblo members use the Valles Caldera to hunt, to gather plants and minerals, including obsidian, and to visit sacred sites and shrines. See, e.g., Nov. 29 Tr. at 4626:9-4627:21 (Anschuetz)(quoting Zia Pueblo member Jerome Lucero's assertions that, "[g]enerally, members of the Pueblo of Zia visit various area of the Valles Caldera Preserve to hunt, gather plants and minerals for ceremonial purposes or visit shrines and sites. This is throughout the year at various times pursuant to our religious activities"); Anschuetz Report at 172 ("Available ethnographic information for the Pueblos of Zia, Santa Ana, and Jemez compiled for presentation to the ICC refers to the presence of numerous community shrines throughout the Jemez Mountains, including the Valles Caldera."); id. at 178 ("In a 2002 public presentation during which he talked of Zia' continuing use of the Valles Caldera and its resources, Pino . . . shared that Zia traditional practitioners continue to haft obsidian spear and arrow points in fore shafts fashioned from the bases of antlers."[139]); Geothermal Impacts Report at 60 ("Jose La Cruz Galvan, age 73, who has

[139]Jemez Pueblo asks the Court to find that "Dr. Anschuetz's notes from his interview of Peter Pino indicate that when asked 'Does the Pueblo of Zia have a meaningful relationship with the VCNP?,' Mr. Pino said, 'Not really,'" which evidences that Zia Pueblo no longer uses the Valles Caldera. Jemez Pueblo's Proposed Findings ¶ 627, at 199 (citing Transmittal Letter and Transcript sent to Peter Pino re: interview from the project Use, Access, and Fire/Fuel Management Attitudes and Preferences of User Groups Concerning VCNP and Adjacent Areas at 11 (dated Aug. 16, 2012), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 21). Pino's full statement asserts, however, that restrictions prevent Zia Pueblo members from using the Valles Caldera to the extent that they would otherwise use it absent such restrictions. See Transmittal Letter and Transcript sent to Peter Pino re: interview from the project Use, Access, and Fire/Fuel Management Attitudes and Preferences of User Groups Concerning VCNP and Adjacent Areas at 11 ("[D]oes the Pueblo have access to the VCNP to do what it needs to do? 'I think that we do, but . . . sometimes it's a whole lot easier to come to [redacted] instead of Redondo Peak . . . Because the process [to obtain the necessary approvals] is so

served as Zia governor 5 times pointed out that all this land originally belonged to Zia, [redacted].

376. In addition to Redondo Peak, Zia Pueblo has traditional place names[140] for the Valles Caldera's six smaller peaks, [redacted] See, e.g., Nov. 29 Tr. at 4633:21-4634:24 (Anschuetz)([redacted]), id. at 4640:9-4641:14 (Anschuetz); id. at 4642:5-4643:8 (Marinelli, Anschuetz)(explaining Ellis' map identifying certain places within the Valles Caldera sacred to Zia Pueblo); Anschuetz Report at 88 [redacted]; Valles Caldera Religious Use at 51 [redacted]

cumbersome.'" (quoting Pino)(brackets within Pino quotation in original)). The Court, therefore, will not adopt the proposed fact.

[140]Ferguson acknowledged that, in approximately 1980, Ellis identified sixteen Zia Pueblo place names within the Valles Caldera, that Zia Pueblo likely has additional place names within the Valles Caldera, that Zia Pueblo's Valles Caldera use for pilgrimages means that Zia Pueblo likely collected water and plants from the Valles Caldera, and that Zia Pueblo has likely used the Valles Caldera for purposes similar to Jemez Pueblo. See, e.g., Nov. 6 Tr. at 1964:11-1979:1 (Marinelli, Ferguson); Ellis Zia Map at 1.

Jemez Pueblo asks the Court to find that, "in contrast to the nine to sixteen Zia place names identified in DX-EY, Jemez members and Jemez's expert Dr. Ferguson identified at least ninety Jemez place names within the Claim Area, demonstrating Jemez's dominant use." Jemez Pueblo's Proposed Findings ¶ 624, at 197 (citing Ferguson Report at 149). For reasons stated above, which discuss Ferguson's methodology and conclusions, the Court concludes that merely aggregating place names is an inadequate method to determine whether Jemez Pueblo used the Valles Caldera to a degree greater than the other Tribes that have asserted similar Valles Caldera use. The Court, therefore, will not adopt the proposed fact.

[redacted]

377. Zia Pueblo views as sacred all of Redondo Peak, [redacted] See, e.g, Anschuetz Report at 170 [redacted]; id. at 164 [redacted]; id. at 169-70 [redacted].

378. During traditional religious and secular ceremonies and meetings, [redacted] See, e.g., Nov. 29 Tr. at 4635:1-4640:3 (Anschuetz) [redacted] id. at 4643:9-4644:4 (Anschuetz); Anschuetz Report at 195 [redacted]; Valles Caldera Religious Use at 44 [redacted]

379. Zia Pueblo sees a simulacrum of an eagle in Redondo Peak. See, e.g., Jemez v. DOE, Summary Judgement Motion 88-90 ; Valles Caldera Religious Use at 44 ; Anschuetz Report at 164

380. Zia Pueblo attaches great spiritual significance to the Jemez River, including its Valles Caldera tributaries and headwaters. See, e.g., Nov. 29 Tr. at 4657:1-23 (Anschuetz, Marinelli)(asserting that Zia Pueblo likens water from springs surrounding Redondo Peak "to holy water in the Catholic church"); Interview with Governor Carl Brent Schildt, Lt. Governor Jerome Lucero, and Francisco Toribio, with Joseph A. Little, Eq., and Lisa A. Franceware, Esq., Pueblo of Zia at 4 (Nov. 11, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-RI ("The Jemez Mountains are the source of Zia's water (rain, snow, runoff, springs, seeps, etc.).").

381. Zia Pueblo attaches great spiritual significance to the , which it accesses by passing through the Banco Bonito. See, e.g., Nov. 29 Tr. at 4642:5-22 (Marinelli, Anschuetz) ; id. at 4650:9-4651:5 (Marinelli, Anschuetz) Valles

Caldera Religious Use at 49 [redacted]

382. Zia Pueblo consults with the National Park Service regarding its cultural ties to Redondo Peak and the Valles Caldera as a whole, which it views as central to its origin stories and religion. See, e.g., Dec. 5 Tr. at 5263:18-5264:3 (Marinelli, Silva-Bañuelos)("[Zia Pueblo] definitely expressed strong interest in ceremonial religious cultural connections to the Preserve. They were interested in access issues and management issues by the Trust."); id. at 5372:11-24 (Silva-Bañuelos)("Zia Pueblo has a cultural tie to Redondo Peak as a sacred mountain. And my conversations with the lieutenant governor reinforced that Zia has place names for Valles Caldera, its center of their origin stories and religion.").

383. Zia Pueblo members [redacted] See, e.g., Nov. 7 Tr. at 2027:16-17 (Marinelli, Lucero) [redacted] Valles Caldera Religious Use at 51 [redacted]

384. [redacted].[141] See, e.g., Nov. 7 Tr.

[141]Jemez Pueblo members and associates testified that, [redacted] See, e.g., Oct. 29 Tr. at 256:18-257:12 (P. Tosa); Nov. 4 Tr. at 1222:25-1226:8 (Whatley); Nov. 9 Tr. at 2638:20-23 (J. Madalena); Nov. 20 Tr. at 4365:12-14 (V. Gachupin). [redacted] Nov. 4 Tr. at 1368:16-1369:2 (Whatley).

at 2019:9-2020:17 (Marinelli, Lucero)( ); id. at 2060:17-25 (Lucero)(" [142]); Dec. 3 Tr. at 5080:25-5082:25 (Marinelli, Anschuetz)( ); Dec. 5 Tr. at 5219:6-12 (Marinelli, Silva-Bañuelos)( )

[142]Jemez Pueblo asks the Court to find that, Jemez Pueblo's Proposed Findings ¶ 626, at 198 (citing Nov. 7 Tr. at 2019:9-202:20 (J. Lucero); id. at 2021:4-24 (J. Lucero); id. at 2022:6-17 (J. Lucero); id. at 2050-2051:16-20 (J. Lucero); id. at 2058:10-14 (J. Lucero); id. at 2059:8-16 (J. Lucero)). The Court concludes that See, e.g., Nov. 7 Tr. at 2019:9-202:20 (J. Lucero)( ); id. at 2021:4-24 (J. Lucero) ; id. at 2022:6-17 (J. Lucero) ; id. at 2050-2051:16-20 (J. Lucero)(; id. at 2058:10-14 (J. Lucero) id. at 2059:8-16 (J. Lucero)(The Court, therefore, will not adopt the proposed fact.

; Pino Interview Notes at 11 (

385. .[143] See, e.g., Dec. 5 Tr. at 5234:20-23 (Brar, Ziehe)(

[143]Jemez Pueblo asks the Court to find that, Jemez Pueblo's Proposed Findings ¶ 631, at 200 (citing Oct. 31 Tr. at 785:9-25 (B. Shendo); Nov. 16 Tr. at 3899-3901:23-12 (deBuys); Nov. 29 Tr. at 4631-4632:8-7 (Anschuetz); Dec. 5 Tr. at 5234:10-23 (Ziehe)). The Court concludes that See, e.g., Nov. 7 Tr. at 2019:9-2020:17 (Marinelli, Lucero)(; id. at 2060:17-25 (Lucero Dec. 3 Tr. at 5080:25-5082:25 (Marinelli, Anschuetz) Dec. 5 Tr. at 5219:6-12 (Marinelli, Silva-Bañuelos) Pino Interview Notes at 11 Dec. 5 Tr. at 5234: 20-23 (Brar, Ziehe Anschuetz Report at 166 id. at 168 The Court, therefore, will not adopt the proposed fact so far as the proposed fact implies that

[redacted] Fax from Governor Toribio to Matthew Gachupin -- Attendance List at 1-2 (dated Aug. 1, 2001), admitted October 29, 2018, at trial as United States' Ex. DX-IP; Anschuetz Report at 166 [redacted]; id. at 168 [redacted]

386. [redacted],[144] [redacted] See, e.g., Nov. 16 Tr. at 3899:23-3901:9 (Leonard, deBuys)([redacted]

[144] [redacted] See, e.g., Nov. 9 Tr. at 2638:12-2639:3 (J. Madalena); Nov. 13 Tr. at 3028:13-3031:8 (Steffen); Nov. 16 Tr. at 3806:5-3087:3 (R. Loretto); id. at Tr. 3899:17-3901:12 (deBuys). [redacted] See, e.g., Oct. 29 Tr. at 256:18-257:12 (P. Tosa); Oct. 31 Tr. at 801:6-19 (B. Shendo); Nov. 4 Tr. at 1222:25-1226:8 (Whatley); Nov. 9 Tr. at 2638:20-2639:15 (J. Madalena); Nov. 13 Tr. at 3028-3031:13-8 (Steffen); Nov. 16 Tr. at 3806-3807:5-3 (R. Loretto); id. at 3899:23-3901:9 (Leonard, deBuys); Nov. 19 Tr. at 4248:24-4249:4 (D. Yepa). [redacted] See, e.g., Designation of Deposition Testimony -- Joseph Toya at 102:1-5 (Toya) [redacted]

[redacted]; id. at 3900:20-3901:7 (deBuys) [redacted]

[redacted]

[redacted]

Dec. 5 Tr. at 5234:25-5234:3 (Brar, Ziehe) [redacted]

[redacted]

[redacted] id. at 5236:9-12 (Brar, Ziehe) [redacted]

[redacted]

[redacted]

387. At some date between 2002 and 2010, [redacted]

[redacted] See, e.g., Nov. 20 Tr. at 4631:20-4632:7 (Anschuetz, Marinelli) [redacted]

[redacted] Pino Interview Notes at 11 [redacted]

[redacted]

[redacted]

388. [redacted]

[redacted] See, e.g., Nov. 20 Tr. at 4632:8-4633:19 (Marinelli, Anschuetz) [redacted]

[redacted]

[redacted]

[redacted]; Anschuetz Report at 167 [redacted]

[redacted]

389. [redacted]

[redacted]

[redacted]

[redacted]

[redacted] See, e.g., Nov. 29 Tr. at 4644:3-4649:14 (Marinelli, Anschuetz); [redacted]

Anschuetz Report at 159-61 [redacted]

[redacted] id. at 165 ([redacted]

[redacted]

[redacted] id. [redacted]

[redacted]

[redacted]

390. [redacted]

[redacted] See, e.g., Religious Freedom at 47-48, 56-57 [redacted]

[redacted]

id. at 53 [redacted]

[redacted] Valles Caldera Religious Use at 59 [redacted]

[redacted]

[redacted]

391. The Valles Caldera is sacred to Zia Pueblo, in part, because Zia Pueblo believes that [redacted] See, e.g., Anschuetz Report at 202 [redacted] Jemez v. DOE, Summary Judgment Motion at 6 [redacted]

392. [redacted] E.g., Nov. 29 Tr. at 4645:13-4649:14 (Marinelli, Anschuetz) [redacted] Valles Caldera Religious Use at 48-49 [redacted] Religious Freedom at 31-32 [redacted]

393. Through at least the 1970s, [redacted] See, e.g., Religious Freedom at 47-48 [redacted]; ICC Tr. at 59-60 (P. Toya) [redacted]

394. Through at least the 1970s, [redacted] See, e.g., Valles Caldera Religious Use at 52-56 [redacted]; Religious Freedom at 48-50 [redacted]; Anschuetz Report at 159 [redacted].

395. Through at least the 1970s, [redacted] E.g., Religious Freedom at 39-40 [redacted]; Anschuetz Report at 160 [redacted].

396. Through at least the 1970s, [redacted] See, e.g. Nov. 29 Tr. at 4664:4-14 (Marinelli, Anschuetz) [redacted]

[redacted] Religious Freedom at 53 [redacted]

[redacted]

397. Through at least the 1970s, [redacted]

[redacted] See, e.g., Religious Freedom at 41-42 [redacted]

[redacted]; Anschuetz Report at 160 [redacted]

[redacted]

398. Through at least the 1970s, [redacted]

[redacted]

[redacted] See, e.g., Religious Freedom at 42 [redacted]

[redacted]

id. at 44 [redacted]

[redacted]; Anschuetz Report at 160 [redacted]

[redacted]

399. Through at least the 1970s, Zia Pueblo's [redacted] See, e.g., Religious Freedom at 47 [redacted] Anschuetz Report at 161 [redacted]

400. [redacted] See, e.g., Nov. 29 Tr. at 4659:20-4660:14 (Marinelli, Anschuetz) [redacted]; Religious Freedom at 46 [redacted].

401. Through at least the 1970s, [redacted] See, e.g., Religious Freedom at 47-48 ([redacted]); Anschuetz at 161 [redacted].

402. Through at least the 1970s, [redacted] See, e.g., Religious Freedom at 49

[redacted]; Anschuetz Report at 161 [redacted]

403. Through at least the 1970s, leaders from Zia Pueblo's [redacted] See, e.g., Nov. 29 Tr. at 4662:4-4663:10 (Marinelli, Anschuetz)[redacted] Religious Freedom at 60 [redacted]; Anschuetz Report at 161 [redacted]

404. Through at least the 1970s, Zia Pueblo's societies used the Valles Caldera for annual cultural activities that occurred in January, March, April, June, August, October, and December. See, e.g., Nov. 29 Tr. at 4670:9-4673:15 (Marinelli, Anschuetz)(discussing specific

Zia Pueblo ceremonies that occurr in each month); Religious Freedom at 7-9 (discussing Zia Pueblo fiesta, dance, and ceremony dates).

405. Zia Pueblo's activity calendar establishes that virtually every Zia Pueblo member used the Valles Caldera through at least the late 1970s. See, e.g., Nov. 29 Tr. at 4673:16-4674:13 (Marinelli, Anschuetz)(concluding that the Zia Pueblo activity calendar, when considered alongside Anschuetz's table of society activities, establishes that the entire Pueblo uses the Valles Caldera); Anschuetz Report at 159-61 [redacted]

406. Zia Pueblo continues to use the Valles Caldera, and its members have snuck onto Redondo Peak during times non-Indians restricted their access. See, e.g., Nov. 7 Tr. at 2073:14-22 (Lucero)("Ever since the land came under private ownership, and then the Park Service under Jemez member Park Service staff, Zia was restricted from accessing this land. Either our members have been escorted on to the land, or staff from the Park Service would prevent our access."); Zia Pueblo Interviews at 3-4 ("The Pueblo of Zia requires access to the VCNP. The Pueblo suffered great harm when the access of its members to Redondo and the Valles was impeded by past land owners. Even under the administration of the VCNP and [National Park Service], permit requirements are problematic.").

407. Zia Pueblo considers its Valles Caldera use highly sensitive and refuses to disclose detailed information regarding its current religious practices; however, its current use is substantially similar to that which occurred through at least the 1970s. See, e.g., Nov. 7 Tr. at 2073 (Lucero)("Members of the Pueblo continue to have the need to access the Valles Caldera Preserve for the same religious uses and activities as our ancestors had used the land for

centuries."); Nov. 29 Tr. at 4674:14-4676:3 (Anschuetz, Marinelli)("[Zia Pueblo] maintained that the knowledge that Dr. Ellis had shared, especially for the Baca geothermal . . . project, was dangerous because it involved matters of spiritual power, as well as a spirituality."); Zia Pueblo Interviews at 3 ("[Zia Pueblo] indirectly verified the accuracy of these accounts by saying that they regret I already know too much detail as their faces reddened and voices raised. In a nutshell, they hold firm that Zia Pueblo already has shared sufficient information that we need.").

408. Zia Pueblo members continue to walk to the Valles Caldera from Zia Pueblo. See, e.g., Nov. 7 Tr. at 2073:4-2074:15 (Marinelli, Lucero); Anschuetz Report at 168 ("'Some of our members continue to trek to the Valles Caldera . . . during various times of the years for our traditional practices." (quoting then-Zia Pueblo Lieutenant Governor Jerome Lucero)).

409. Zia Pueblo constructed [redacted] See, e.g., Nov. 7 Tr. at 2024:3-2026:3 (Marinelli, Lucero) [redacted] Zia Pueblo Interviews at 3-4.

C. Other Non-Jemez Tribes' and Pueblos' Interests in the Valles Caldera.

410. Cochiti Pueblo ancestral domain extended into the Valles Caldera, and it continues to worship at Redondo Peak, for which it has a place name. See, e.g., Nov. 9 Tr. at 2712:2-9 (West, Suina)(defining "ancestral domain" as "a particular area that is within the domain of a particular community or pueblo . . . . [I]t's land that they have oversight on, but also responsibility for."); id. at 2713:20-2714:4 (West, Suina)(asserting the Cochiti Pueblo's ancestral domain

"crosses . . . into the Valles Caldera some, not a lot"[145]); id. at 2723:14-2724:12 (West, Suina) [redacted]; id. at 2781:4-20 (Marinelli, Suina)(discussing Cochiti Pueblo's Valles Caldera place names); Letter from Cochiti Governor Suina to Valles Caldera Trust (dated Feb. 4, 2014), admitted October 29, 2018, at trial as United States' Ex. DX-NQ, ("The cultural and religious practices entwined with Kowahnahmah AKA Valles Caldera are an integral part of our heritage and our continued traditional way of life.").

411. [redacted] See, e.g., Nov. 6 Tr. at 1927:9-24 (Marinelli, Ferguson) [redacted]

[145]Although Suina asserted that Jemez Pueblo's ancestral domain includes the Valles Caldera portions beyond Cochiti Pueblo's ancestral domain, such testimony is problematic because, among other things, Suina admitted: (i) Cochiti Pueblo's ancestral domain concept shifts over time; (ii) Cochiti Pueblo's ancestral domain includes Valle Grande portions and Redondo Peak; (iii) Suina believes that the Valles Caldera's northeast corner is exclusive to Santa Clara Pueblo; and (iv) Cochiti Pueblo does not request Jemez Pueblo's permission to access the Valles Caldera. See, e.g., Nov. 9 Tr. at 2713:20-2714:4 (West, Suina)(asserting that Valles Caldera portions are within Cochiti Pueblo's ancestral domain); id. at 2788:10-15 (Marinelli, Suina)(asserting that Cochiti Pueblo's ancestral domain includes the Valle Grande and Redondo Peak); id. at 2736:3-10 (Marinelli, Suina)(asserting that Cochiti Pueblo's defines land different from the "dominant world": "So it's like the air we breathe. You know, you can't put a fence around it. You can't lay claim to it. But you have to make sure that it's clean and it's usable for everybody"); id. at 2737:6-8 (West, Suina)(affirming that, to access Redondo Peak, Cochiti Pueblo does not seek permission from Jemez Pueblo); id. at 2743:9-18 (Marinelli, Suina)(asserting that Cochiti Pueblo's "ancestral domain" boundaries "are not very clearly defined" and "fluid"); id. at 2791:13-18 (Marinelli, Suina)(affirming that the Valles Caldera's northeast corner is exclusive to Santa Clara Pueblo). Moreover, Jemez Pueblo does not satisfy Suina's Valles Caldera "gatekeeper" definition, because in Suina's lifetime Jemez Pueblo has not been able to prevent "poaching" or "illegal" activities within those lands. E.g., Nov. 9 Tr. at 2729:1-21 (West, Suina)(defining "gatekeeper" and asserting that a gatekeeper should attempt to prevent "[p]oaching or illegal activity of any type"); id. at 2792:3-17 (Marinelli, Suina)(acknowledging that Cochiti Pueblo does not know whether Jemez Pueblo polices poaching within the Valles Caldera); Dec. 3 Tr. at 5134:15-25 (Chavarria)(stating that Santa Clara Pueblo views itself as Valles Caldera steward and does not view Jemez Pueblo as "gatekeeper").

[redacted]; Nov. 9 Tr. at 2723:14-2724:12 (West, Suina).

412. Cochiti Pueblo collects clays, plants, and minerals from the Valles Caldera. See, e.g., Nov. 6 at 1929:20-1933:13 (Marinelli, Ferguson)(affirming that Cochiti Pueblo gathered plants and minerals within the Valles Caldera); Nov. 9 Tr. at 2721:16-2722:20 (West, Suina)(stating that Cochiti Pueblo collects plants, clay, and obsidian from the Valles Caldera).

413. Cochiti Pueblo has consulted with the National Park Service regarding its cultural connections to the Valles Caldera. See, e.g., Dec. 5 Tr. at 5263:9-17 (Marinelli, Silva-Bañuelos)("My take-away was there were ancestral use sites, shrines, other cultural archaeological sites that were of interest to [Cochiti Pueblo] and their preservation and protection."); Letter from Gov. Herrera, Pueblo de Cochiti, to Valles Caldera National Preserve (dated March 10, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-QO ("We respectfully request access to sites or locations within the Preserve for use, collection, gathering, transporting or taking of plants, minerals, wildlife and other resources, and may include the restoration, repatriation, preservation and protection of sites to perform ceremonial activities in accordance with our traditional cultural rules of practice.").

414. San Ildefonso Pueblo traditionally viewed the Valles Caldera as a commons.[146] See, e.g., Nov. 29 Tr. at 4565:17-4569:10 (Marinelli, Anschuetz)(explaining concept of tetrads as

[146]Although San Ildefonso Pueblo presently supports Jemez Pueblo's Valles Caldera claim in this litigation, see Jemez Pueblo's Proposed Findings ¶ 574, at 174 (citing Pueblo of San Ildefonso Tribal Council Resolution No. SI-R17-021 (dated July 7, 2017), admitted October 29, at trial as Jemez Pueblo's Ex. 211), the Court concludes that San Ildefonso Pueblo's prior assertions regarding the Valles Caldera's non-exclusivity and use as a commons more accurately reflect the Valles Caldera's historic use, see, e.g., Nov. 6 Tr. at 1783:2-13 (Ferguson)(recognizing

providing geographic boundaries within a pueblo's cultural landscape); Nov. 30 Tr. at 4696:6-4697:25 (Marinelli, Anschuetz)(highlighting San Ildefonso Pueblo's statements regarding non-exclusivity); Anschuetz Report at 203 ("San Ildefonso representatives clearly articulate their community's embrace of the view that the Valles Caldera constitutes a commons with which San Ildefonso and other Tribes possess continuing essential relationship."); Position Statement -- Pueblo of San Ildefonso on Potential Federal Legislation Concerning Tribal Aboriginal Title Claims to Baca Location No. 1 Submitted to the Honorable Bill Redmond at 3 (dated Jan. 20, 1999), admitted November 20, 2019, at trial as United States' Ex. DX-HL ("Position Statement -- Pueblo of San Ildefonso")("San Ildefonso has significant ties . . . to the lands encompassed in the third and fourth tetrads. Other pueblos have equally important ties to these areas. . . . [T]he lands referred to today as Baca Location Number 1 which includes the Valle Grande, are generally within the third and fourth tetrads."); id. at 4 ("[T]he Pueblo [of San Ildefonso] believes that national, regional, and pueblo interests can best be served by taking the area into federal ownership, but affirmatively recognizing the right of the Pueblos to continue non-exclusive aboriginal uses on these lands."); id. ("Even if legislation allowed return of small portions of the land along the outer boundary of the property to different pueblos, it would have the effect of cutting off the time immemorial uses of one Pueblo on lands claimed by another.").

415. San Ildefonso Pueblo consulted with the Valles Caldera Trust and the National Park Service on various issues, including its aboriginal hunting grounds, grazing concerns, and tribal

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the value of contemporaneous material); Position Statement -- Pueblo of San Ildefonso on Potential Federal Legislation Concerning Tribal Aboriginal Title Claims to Baca Location No. 1 Submitted to the Honorable Bill Redmond at 3 (dated Jan. 20, 1999), admitted November 20, 2019, at trial as United States' Ex. DX-HL.

access. See, e.g., Nov. 14 Tr. at 3271:12-3272:15 (Steffen)(stating that San Ildefonso Pueblo's 2016 Valles Caldera access request was for traditional cultural activity); id. at 3273:14-3274:9 (Steffen)(asserting that San Ildefonso Pueblo conducted a traditional cultural education trip to the Valles Caldera in 2010 or 2012); San Ildefonso Tribal Consultation Meeting Notes at 1 (dated March 5, 2002), admitted Dec. 5, 2018, at trial as United States' Ex. DX-IY (expressing interest in a tour for San Ildefonso elders and concerns over grazing, and hunting); Letter from John Gonzales, Governor, Pueblo of San Ildefonso to Dennis Trujillo, Preserve Manager, Valles Caldera National Preserve regarding a site visit to Valles Caldera Preserve at 1 (dated Sept. 11, 2002, admitted October 29, 2018, at trial as United States' Ex. DX-JK ("San Ildefonso has a deep attachment to the Preserve, which was established, many hundreds of years ago. There are cultural ties which the Pueblo desires to reconfirm; therefore, this visit [to the Valles Caldera] is very important."); Email from Anastasia Steffen to Brittney VanDerWerff and Madeline Scheintaub regarding San Ildefonso Youth Group Visit Request at 1 (dated June 21, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-PZ (requesting Valles Caldera access on San Ildefonso youth group's behalf).

416. The Jicarilla Apache Nation engaged in numerous consultations with the Valles Caldera Trust, including on a project involving the Valles Caldera's entire north-south corridor. See, e.g., Nov. 13 Tr. at 2917:2-17 (Marinelli, Steffen)(describing the north-south corridor project's scope and Jicarilla Apache Nation's involvement); Letter from Jicarilla Apache Tribe to Valles Caldera Trust Regarding Response to Road B Repairs on VCNP (dated June 27, 2003), admitted November 13, 2018, at trial as United States' Ex. DX-JS (requesting consultation).

417. The Navajo Nation has place names for the Valle Grande and the Jemez Mountains.[147] See, e.g., Letter from the Navajo Nation, Traditional Culture Program to Jeff Cross, Executive Director, Valles Caldera at 1 (dated April 10, 2008), admitted October 29, 2018, at trial as United States' Ex. DX-LG ("Navajo Nation Letter")("[T]here are numerous Cultural Sacred Sites located within the proposed project area: 1) Ni'Ch'ihoyoolts'il -- Ground That Cracked Out -- Valle Grande, and 2) Dzil lizhin -- Jemez Mountains."); Valles Caldera Transition Consultation at 4 (dated April 23, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-OM ("[The Valles Caldera] is a place of identity. Place names, too.").

418. The Navajo Nation has consulted with the Valles Caldera Trust and the National Park Service regarding the Valles Caldera's significance to the Navajo, specifically for plant collection.[148] See, e.g., Navajo Tribal Consultation Meeting Notes at 1-2 (dated March 26, 2002), admitted November 13, 2018, at trial as United States' Ex. DX-JA ("Both Redondo and the Valle Grande are sacred areas."); Navajo Nation Letter at 1 ("If the proposed project inadvertently discovers Navajo habitation sites, plant gathering areas, human remains and objects of cultural

[147]Klara Kelley, an uncalled Jemez Pueblo rebuttal witness, admitted in 2003 that multiple "Navajo ceremonial origin stories . . . mention Valle Grande" and that "[t]he cosmographic implications of these two stories a pretty clear: The place is a connecting portal from the earth surface and celestial zones to the underworld," which indicates significant Navajo familiarity with and use of the Valles Caldera. Email from Klara Kelley to Kurt Anschuetz re Valle Grande at 1 (dated April 18, 2003), admitted November 29, 2018, at trial as United States' Ex. DX. See, e.g., Nov. 29 Tr. at 4576:1-4582:4 (Marinelli, Anschuetz)(describing the Navajo Nation's origin stories and asserting that such stories implicate the Valles Caldera); Anschuetz Report at 154 ("The Jemez Mountains and Redondo Peak receive mention in other Navajo oral traditions as important places within the Navajo construction of their landscape as memory.").

[148]Silva-Bañuelos testified that he has not received a formal Tribal access request from the Navajo Nation. See Dec. 13 Tr. at 5465:15-17 (Silva-Bañuelos).

patrimony the HPD-TCP request that we be notified respectively in accordance with the Native America Graves Protection and Repatriation Act (NAGPRA)."); Valles Caldera Transition Consultation at 4 (dated April 23, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-OM ("I have concerns about new [National Park Service] plant collection policy. . . . The feds should be asking [the Navajo Nation] how to manage the caldera."); Anschuetz Report at 3 (asserting that the Valles Caldera is important to the Navajo Nation's origin traditions and as a mountain of cardinal direction).

419. Santa Ana Pueblo has consulted with the Valles Caldera Trust and the National Park Service on topics including natural resources, restoration, and stewardship. See, e.g., Nov. 13 Tr. at 2998:11-3006:6 (Marinelli, Steffen)(discussing Santa Ana Pueblo's 2014 consultation with Valles Caldera Trust staff and leadership regarding Santa Ana Pueblo's Valles Caldera use), id. at 3014:17-3015:10 (asserting that Steffen met with a Tribe, likely Santa Ana Pueblo, in 2015 to discuss the Valles Caldera National Preserve foundation document); Dec. 13 Tr. at 5365:2-5366:18 (Marinelli, Silva-Bañuelos)(describing Santa Ana Pueblo's concerns about protecting the Valles Caldera's watershed, waterways, and wildlife); Handwritten Notes of Santa Ana Pueblo Meeting at 1, 4, 8, 10 (dated Sept. 12, 2014), admitted November 13, 2018, at trial as United States' Ex. DX-NZ (memorializing the topics that Santa Ana Pueblo discussed at its 2014 consultation with the Valles Caldera Trust).

420. The Hopi Tribe engaged in numerous consultations with the Valles Caldera Trust regarding its cultural connections to the land and interest in various projects, including road projects in the Valle Grande, Cerro la Jara, and headquarters areas, and was the only Tribe to enter into a Memorandum of Agreement with the Valles Caldera Trust and New Mexico regarding a

Terrestrial Ecosystem/Soils project, which involved surveying locations throughout the Valles Caldera. See, e.g., Nov. 13 Tr. at 2910:8-2914:1 (Marinelli, Steffen)(discussing the Hopi Tribe's interest in Valles Caldera road development projects); id. at 2928:21-2930:19:6 (Steffen, Marinelli)(describing the Hopi Tribe's interest in the Valles Caldera Terrestrial Ecosystem/Soils project and asserting that the Hopi Tribe was the only Tribe to sign a memorandum of Agreement with the Valles Caldera Trust regarding the project); Nov. 29 Tr. at 4530:15-4531:21 (Anschuetz, Marinelli)(stating that the Tewa Hopi came from near Chimayo, Abiquiu, which is on the Jemez Mountains' northeast side, and southeast of Santa Fe); Letter from the Hopi Tribe Cultural Preservation Office to Dennis Trujillo, VCNP Regarding Response to Development Project on VCNP (dated July 24, 2002), admitted October 29, 2018, at trial as United States' Ex. DX-JH (asserting the Hopi Tribe's interest in the Valles Caldera based on cultural affiliation); Letter from the Hopi Tribe to Anastasia Steffen, VCNP at 1 (dated Dec. 24, 2002), admitted October 29, 2018, at trial as United States' Ex. DX-JL (discussing consultation and correspondence between the Hopi Tribe and the Valles Caldera Trust "regarding reconstruction of 3.7 miles of the primary road system into the Preserve, and installation of culverts to facilitate stream crossings"); Handwritten Note in File of Meeting with AIPC Regarding Response to TES/Soil Survey at 1 (dated June 28, 2003), admitted November 13, 2018, at trial as United States' Ex. DX-JT ("Notes re: TES/Soils project")(suggesting that a Tribe with Tewa ancestry should be "lead tribe for consultation"); Letter from Wayne Taylor, Jr., Chairman, Hopi Tribe to Gilbert Zepeda, Acting Forest Supervisor, Santa Fe National Forest Regarding Hopi Tribe Cultural Affiliation with Prehistoric Cultural Groups in the Valles Caldera Area at 1 (dated July 14, 2003), admitted November 13, 2018, at trial as United States' Ex. DX-JU ("[T]he Hopi Tribe claims cultural affiliation to prehistoric cultural

groups in New Mexico, and specifically to the Valle Caldera area through the people of Tewa Village."); Letter from Hopi Cultural Preservation Office to Gary Bratcher, Executive Director, Valles Caldera Trust at 1 (dated Aug. 11, 2010), admitted October 29, 2018, at trial as United States' Ex. DX-LS ("Regarding Preserve-wide Planning, we are interested in consulting on updating the current Tribal Access and Use Policy and the development of the Cultural Resources Management Plan. . . . Regarding Cultural Resources, we are also interested in consulting on the Ancestral Pueblo Obsidian Use Study and Banco Prehistoric Agricultural Research Project."); Letter from Hopi Cultural Preservation Office to Dennis Trujillo, Executive Director, Valles Caldera Trust (dated June 29, 2012), admitted October 29, 2018, at trial as United States' Ex. DX-MZ ("The Hopi Cultural Preservation Office has previously stated that we are interested in consulting on any proposal that has the potential to adversely affect National Register eligible prehistoric sites on the Valles Caldera National Preserve."); Memorandum of Agreement Among the Valles Caldera Trust and USDA, Forest Service, Southwest Region, and USDA Natural Resources Conservation Service and New Mexico State Historic Preservation Officer regarding Terrestrial Ecosystem and Soils Survey on the Valles Caldera National Preserve at 9 (dated Aug. 5, 2003), admitted November 13, 2018, at trial as United States' Ex. DX-JV.

421. The Southern Ute Tribe engaged in numerous consultations with the Valles Caldera Trust regarding its cultural connections to the Valles Caldera, interest in Valles Caldera obsidian sources, and concerns about public access to obsidian locations. See, e.g., Notes re: TES/Soils project at 2 (expressing Southern Ute Tribe's interest in obsidian sources and concerns over public access to obsidian locations); Nov. 13 Tr. at 2923:10-2924:3 (Marinelli, Steffen)(discussing Valles Caldera Trust's consultations with the South Ute Tribe regarding the Tribe's interest in the Valles

Caldera based on historic use); Letter from NAGPRA Coordinator, Southern Ute Tribe to Stephen Chomko, Cultural Resources Coordinator, Valles Caldera Trust re Response to Soil Survey (dated April 30, 2004), admitted November 13, 2018, at trial as United States' Ex. DX-JX (memorializing the Southern Ute Tribe's agreement to consult with the Valles Caldera Trust regarding "the Historic Property Protection and Responsibilities between New Mexico Historic Preservation Officer, the Advisory Council on Historic Preservation and the Valles Caldero [sic] Trust").

422. Laguna Pueblo engaged in numerous consultations with the Valles Caldera Trust regarding its cultural connections to the Valles Caldera, and, at a December 1, 2015 meeting, asserted that the National Park Service needed to consider other Tribes' input regarding Valles Caldera development projects. See, e.g., Nov. 7 Tr. at 2088:6-14 (Marinelli, Ferguson)(affirming that Laguna Pueblo asserted that the Valles Caldera Trust needed to consult Santa Clara Pueblo regarding Valles Caldera development projects); Notes re: TES/Soils project at 1 (expressing Laguna Pueblo's desire to participate in the Valles Caldera Terrestrial Ecosystem and Soils Survey project); VCNP Foundation Document Notes at 5 ("Laguna is guarded by four sacred mountains, including the Jemez Mountains. You've heard how we all use [the Valles Caldera] and how it's changed. . . . . It would be good to get back to how we used to gather and use [the Valles Caldera]."); Letter from Pueblo of Laguna Gov. Luarkie to A. Steffen, Valles Caldera Trust at 1 (dated June 19, 2012), admitted October 29, 2018, at trials as United States' Ex. DX-MY ("According to unpublished migration history, [Laguna Pueblo] ancestors journeyed from the north through [the Valles Caldera] area and settled for periods of time before traveling to our present location.").

423. Tesuque Pueblo engaged in numerous consultations with the Valles Caldera Trust regarding its cultural connections to the Valles Caldera, and, at a December 1, 2015 meeting, conveyed its support for Santa Clara Pueblo's position on Valles Caldera use and development. See, e.g., Nov. 29 Tr. at 4621:12-4622:17 (Marinelli, Anschuetz)(asserting that Tesuque Pueblo members used the Valles Caldera "in the 1960s and 1970s, and possibly later"); Interview Notes with Louie Hena by Kurt F. Anschuetz, Ph.D. at 5 (dated 2011), admitted October 29, 2018, at trial as United States' Ex. DX-ME ("[Tesuque Pueblo member] Louie Hena used to go into the Valles Caldera when the property was still owned by the Dunigans to fish and collect medicines."); VCNP Foundation Document Notes at 7-8 ("Development in [the Valles Caldera] is big concern, especially geothermal. . . . I support [the Santa Clara governor's] points. . . . Multiple tribes have used [the Valles Caldera] 'since time immemorial' and Tesuque has never given up their rights to land, resources, or rights to perform activities." (internal quotation marks for emphasis and not quotation)).

424. The Pueblos of Santa Clara, Zia, San Ildefonso, and Santo Domingo have engaged with the National Park Service to ensure that their youth maintain cultural connections to the Valles Caldera. See, e.g., Dec. 5 Tr. at 5351:22-5354:23 (Marinelli, Silva-Bañuelos)("We've authorized a youth gathering from Santa Clara Pueblo in 2017, and again this year, in 2018."); Email from Anastasia Steffen to Brittney VanDerWerff and Madeline Scheintaub Regarding San Ildefonso Youth Group Visit Request at 1 (dated June 21, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-PZ (discussing request from San Ildefonso Pueblo to visit the Valles Caldera with twenty five students to learn about "traditional cultural practices and places, . . . placenames, agricultural practices, history, and use of obsidian"); Email from Brittney VanDerWerff, [National

Park Service] to Brenda Montoya, Madeline Scheintaub, and Anastasia Steffen Regarding Special Use Permit (dated June 22, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-QA; Email from Brittney VanDerWerff, [National Park Service] to Dutin García, Brenda Montoya and Madeline Scheintaub regarding Academic Use Permit at 1 (dated July 11, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-QB ("I hope that we can figure something out to create an opportunity for the youth of Santo Domingo and many other tribes.").

425. In 2003, the All Indian Pueblo Council[149] consulted with the Valles Caldera Trust to express concern regarding motorized vehicle use in the Valles Caldera. See, e.g., Nov. 13 Tr. at 2917:18-2918:20 (discussing Steffen's notes memorializing Tribal consultations related to the Valles Caldera Terrestrial Ecosystems project); Terrestrial Ecosystems Project at 1 (noting the All Indian Pueblo Council's concerns about Valles Caldera access for recreation and motorized vehicle use).

426. Many Tribes, including the Jicarilla Apache Nation, the Navajo Nation, and the Southern Ute, and the Pueblos of San Ildefonso, Santa Clara, Laguna, Tesuque, and Zia asserted interests in the Valles Caldera, and expressed concerns over Valles Caldera management during multi-tribe meetings on April 23, 2015,[150] and December 1, 2015. See, e.g., Nov. 13 Tr. at

[149]"The All Indian Pueblo Council (AIPC) is a governmental body which advocates for the rights of Pueblo Indians and their territory across the American Southwest. The council is run by the Pueblo governors from each of the nineteen New Mexico Pueblos . . . ." All Indian Pueblo Council, SantaFedia, http://www.santafedia.org/wiki/index.php?title=All_Indian_Pueblo_Council#History (last visited June 19, 2019).

[150]At the April, 2015, meeting, Santa Clara Pueblo Lieutenant Governor Naranjo emphasized that the Santa Clara Pueblo had used the Valles Caldera for religious activities and as a source of food and medicine for "thousands of years;" that the "Caldera is an essential part of [Santa Clara's] traditional cultural landscape;" and that "Pueblo of Santa Clara [has] collect[ed]

3006:11-3010:10 (Marinelli, Steffen)(discussing the April 13, 2015, Tribal consultation meeting); id. at 3015:25-3016:13 (Marinelli, Steffen)(discussing the December 1, 2015, meeting at which seven Tribes attended to discuss the Valles Caldera National Preserve foundation document); Valles Caldera Transition Consultation at 1-6; Email from Kim Greenwood re: VALL Tribal Listening Session at 1 (dated Dec. 21, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-PN (attaching notes summarizing Tribal concerns regarding traditional sites within the Valles Caldera).

427. San Felipe Pueblo engaged in numerous consultations with the Valles Caldera Trust regarding its cultural connections to the Valles Caldera, and, at an April, 2015 meeting, argued that the National Park Service should permit San Felipe Pueblo to continue its traditional Valles Caldera use without disclosing specific locations within the Valles Caldera. See, e.g., Oct. 30 Tr. at 323:2-7 (Solimon, Tosa)(affirming that no Jemez Pueblo members objected to or questioned San Felipe Pueblo's assertions that San Felipe Pueblo has a traditional association with the Valles caldera); VCNP Transition Meeting Notes at 3 ("It is sad that now [San Felipe Pueblo has] to get permissions to gather plants, minerals. . . . Should not have to explain and answer questions about [San Felipe Pueblo's] traditional uses and need for access."); Email from P. Stout, San Felipe, to M. Scheintaub, VCNP at 1 (dated May 12, 2016), admitted October 29, 2018, at trial as United States' Ex. DX-PU ("Valles Caldera area . . . is of traditional and cultural significance and is considered to be Traditional Cultural Property to many pueblos and tribes.").

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minerals, plants, game . . . [in the Valles Caldera] since time immemorial." VCNP Transition Meeting Notes at 2. Moreover, Jemez Pueblo dignitaries in attendance neither objected to nor questioned Naranjo's statements. See Oct. 30 Tr. at 322:5-8 (Solimon, Tosa)(affirming that no Jemez Pueblo members objected to or questioned Naranjo's assertions).

428. The National Park Service incorporated input from seven Tribes into its Valles Caldera Foundation Document, which emphasizes the Tribes' historic use of and contemporary cultural connections to the Valles Caldera. See, e.g., Dec. 5 Tr. at 5391:6–5395:20 (Marinelli, Silva-Bañuelos); VCNP Foundation Document Notes at 3-16 (dated Dec. 1, 2015), admitted October 29, 2018, at trial as United States' Ex. DX-PE; VCNP Foundation Document at 8-10 (dated March, 2018), admitted October 29, 2018, at trial as United States' Ex. DX-RN ("Valles Caldera . . . is of spiritual and ceremonial importance to numerous American Indian peoples in the greater Southwest region. . . . These cultural connections are both contemporary and of great antiquity, and Valles Caldera continues to be part of the practices, beliefs, identity, and history of tribes and pueblos.").

429. Many Tribes use and hold the Jemez Mountains sacred, and the Valles Caldera, as the heart of the Jemez mountains and a source of unique resources, is particularly valued, for example, Santa Clara Pueblo and other Tribes have proposed that the United States classify the Jemez Mountains, of which the Valles Caldera is central, as a "traditional cultural property" given its extreme importance to many Tribes in the region. E.g., Dec. 3 Tr. at 5062:4-5064:21 (Marinelli, Anschuetz)(asserting that all consulting Tribes except Jemez Pueblo oppose geothermal development and seek to protect the entire Jemez Mountains); Santa Fe Nat'l Forest Ethnographic Assessment (Jan. 22, 2016), admitted December 3, 2018, at trial as United States' Ex. DX-VF ("[T]he general consensus among those interviewed within the Puebloan groups and the Jicarilla Apache and Navajo Nation representatives indicated that the Jemez Mountains were important to them as a sacred place, as a sacred landscape, or as a historic landscape.").

430. The National Park Service permits Tribes and Tribal members to gather plants from the Valles Caldera and is consulting with Tribes to develop an annual plant gathering permit that would allow a Tribal member to collect authorized plants using non-lethal collection techniques that the Pueblos requested. See, e.g., Dec. 5 Tr. at 5337:11-5341:3 (Leonard, Silva-Bañuelos)(asserting that, although federal law and regulations protect all resources within a national park, which means that individuals cannot collect plants absent a permit, the National Park Service has worked to tailor its Tribal collection permission policies to fit the Pueblos' and Tribes' needs); id. at 5341:4-9 (Leonard, Silva-Bañuelos)(asserting that the Pueblos of Cochiti, Jemez, and Santa Clara have consulted with the National Park Service regarding plant collections in the Valles Caldera).

D. Jemez Pueblo's Interests in the Valles Caldera.

431. Within the Valles Caldera, Jemez Pueblo uses a complex trail network, which it established over many centuries, for resource procurement, and to access agricultural areas, shrines, springs, and ancestral Jemez Mountains village sites. See, e.g, Ferguson Report at 12; Nov. 7 Tr. at 2186:10-2187:11 (Luebben, J. Madalena); Nov. 20 Tr. 4372:5-4373:20 (Richardson, D. Yepa).

432. Jemez Pueblo has at least ninety place names for locations within the Valles Caldera.[151] See, e.g., Nov. 6 Tr. at 1786:8-23 (Ferguson)(affirming that Ferguson identified ninety

[151]Ferguson, who over an eight-year period documented Jemez Pueblo's ninety Valles Caldera place names, does not know how frequently Jemez Pueblo members used or use these sites. See, e.g., Nov. 6 Tr. at 1903:1-21 (Marinelli, Ferguson)(affirming that Jemez Pueblo does not use annually every site in Ferguson's cultural atlas); id. at 1904:9-1905:5 (Marinelli, Ferguson)(affirming that some Jemez Pueblo shrines go many years without physical use); Nov. 7 Tr. at 2115:10-22 (Marinelli, Ferguson). That Jemez Pueblo has ninety names for sites within

Hemish places in the Valles Caldera); Ferguson Report at 7 ("Hemish place names document extensive use of the Valles Caldera National Preserve for religious activities, trails, eagle-catching, hunting,[152] fishing, plant collecting, tree harvesting, mineral collection, logistical camps, and ancient agriculture.").

433. Jemez Pueblo members describe the trails that lead from [redacted] as spiritual channels and umbilical cords, and place special significance on the trail that leads to [redacted]. See, e.g., Oct. 30 Tr. at 303:1-304:4 (P. Tosa); id. at 332:10-333:1 (Solimon, P. Tosa); Nov. 6 Tr. at 1863:17-1864:17 (Ferguson); Oct. 31 Tr. at 781:21-782:5 (B. Shendo)[redacted] Nov. 20 Tr. at 4375:11-23 (V. Gachupin)[redacted]

the Valles Caldera does not establish that Jemez Pueblo members historically used or presently use these locations. See, e.g., Nov. 30 Tr. at 4744:14-4745:13 (Anschuetz); Anschuetz Rebuttal Report at 38 ("With regard to the relative intensity of Jemez's physical interactions with the VCNP, . . . the Pueblo's scale of use has undergone substantive changes over the past 150 years because the traditional Valles Caldera commons of the region's Native populations became private property.").

[152]Ferguson does not know how frequently Jemez Pueblo conducts societal hunting activities in the Valles Caldera. See, e.g., Nov. 6 Tr. at 1905:10-1906:19 (Marinelli, Ferguson)(affirming that Ferguson does not know how frequently Jemez Pueblo hunted in the Valles Caldera in the nineteenth century but that any such hunting decreased in the twentieth century during the Valles Caldera's private ownership period); Nov. 7 Tr. at 2093:11-16 (Ferguson) [redacted]).

434. Jemez Pueblo conceptualizes all Valles Caldera watercourses as [redacted]. See, e.g., Nov. 6 Tr. at 1812:3-1813:11 (Keegan, Ferguson); High Altitude Adaptations at 115; id. at 117.

435. Jemez Pueblo members gather resources from the Valles Caldera, including obsidian, pigments and minerals for dyes, during pilgrimages, hunts, initiations, or when a religious society's plant supply is low. See, e.g., Nov. 1 Tr. at 973:3-15 (Solimon, Loretto); Nov. 5 Tr. at 1719:17-1720:3 (Solimon, G. Gachupin); Nov. 9 Tr. at 2839:24-2841:9 (Solimon, J. Gachupin); Nov. 7 Tr. at 2274:10-2275:1 (Luebben, J. Madalena), id. at 2182:25-2184:9 (Luebben, J. Madalena); High Altitude Adaptations at 114.

436. Jemez Pueblo medicine societies range [redacted]. See, e.g., Nov. 1 Tr. at 978:13-25 (Loretto); Map Utilized in Court by Witness Thurman Loretto at 1 (undated), admitted December 13, 2018, at trial as Jemez Pueblo's Ex. PX 574 ([redacted]); Ferguson Report at 28.

437. [redacted]. See, e.g., Nov. 1 at Tr. 853:6-23 (Richardson, P. Correo); Nov. 7 Tr. at 2191-2192:23 (Luebben, J. Madalena); Nov. 6 Tr. at 1866:24-1867:16 (Keegan, Ferguson); High Altitude Adaptations at 111-14.

438. Jemez Pueblo members use [redacted] See, e.g., High Altitude Adaptations at 111-14, 118; id. at 129-30; Nov. 6 Tr. at 1823:2-1824:14 (Keegan, Ferguson); id. 1867:8-16 (Keegan, Ferguson), id. at 1872:2-4 (Keegan, Ferguson); Ferguson Report at 88; id. at 124.

439. Jemez Pueblo members use obsidian for ceremonies and, historically, as a trade item, and they gather obsidian from Cerro del Medio. See, e.g., Nov. 7 Tr. at 2180:14-2181:8 (Luebben, J. Madalena); Nov. 7 Tr. at 2183:1-14 (Luebben, J. Madalena); Ferguson Report at 88-89.

440. Jemez Pueblo members [redacted] See, e.g., Nov. 1 Tr. at 1065:6-15 (Kicking Woman, Weslowski); Nov. 19 Tr. at 4223:19-20 (Marinelli, D. Yepa); High Altitude Adaptations at 110.

441. The animals that Jemez Pueblo members hunt within the Valles Caldera include mule deer, elk, rabbit, buck, beaver, squirrel, antelope, turkey, sheep, cougar, and bear. See, e.g., Oct. 29 Tr. at 237-238:1-23 (P. Tosa); Nov. 5 Tr. at 1714:20-23 (G. Gachupin); Draft -- Meeting Summary Valles Caldera Trust at 4 (dated Feb. 27, 2010), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 363; Designation of Deposition Testimony -- Margaret Loretto at 18:3-16 (Loretto); id. at 28:24-25 (Loretto); High Altitude Adaptations at 108-11; id. at 116; Ferguson Report at 45; Map Used in Court by Witness Paul Tosa at 1 (undated), admitted December 13, 2018, at trial as Jemez Pueblo's Ex. PX 571 (identifying with a green "X" the locations where Jemez Pueblo members hunt mule deer).

442. [redacted] See, e.g., Nov. 5 Tr. at 1483:23-1484:9 (P. Chinana)([redacted]); Ferguson Report at 26; Pueblo of Jemez v. United States, Oct. 25 MOO at 119 n.39, 350 F. Supp. 3d at 1119-110.

443. [redacted] See, e.g., Oct. 29 Tr. at 216:16-218:22 (Solimon, P. Tosa); Nov. 15 Tr. at 3684:7-24 (Solimon, C. Toya).

444. [redacted] See, e.g., Ferguson Report at 15; Nov. 6 Tr. at 1857:16-23 (Keegan, Ferguson).

445. [redacted] See, e.g., Nov. 6 Tr. at 1828:16-11 (Keegan, Ferguson); Ferguson Report at 8-10.

446. [redacted] See, e.g., Nov. 6 Tr. at 1829:4-7 (Keegan, Ferguson); Ferguson Report at 108.

447. [redacted] See Nov. 6 Tr. at 1829:11-14 (Keegan, Ferguson); Ferguson Report at 110.

448. [redacted] See Nov. 6 Tr. at 1829:15-20 (Keegan, Ferguson); Ferguson Report at 110-11.

449. [redacted] See, e.g., Nov. 9 Tr. at 2830:24-2831:14 (Solimon, J. Gachupin); Ferguson Report at 35-36.

450. [redacted] See, e.g., Nov. 9 Tr. at 2833:10-18 (Solimon, J. Gachupin); Ferguson Report at 35-36.

451. [redacted] See, e.g., Nov. 9 Tr. at 2835:1-3 (Solimon, J. Gachupin); id. at 2837:12-23 (Solimon, J. Gachupin).

452. [redacted] See, e.g., Nov. 6 Tr. at 1868:5-16 (Keegan, Ferguson); Nov. 20 Tr. at 4373:9-11 (V. Gachupin); Map Utilized in Court by Witness John Gachupin (undated), admitted December 13, 2018, as Jemez Pueblo's Ex. 578 ([redacted]); Ferguson Report at 86.

453. [redacted] See, e.g., Oct. 31 Tr. at 769:15-770:3 (Solimon, B. Shendo); Nov. 5 Tr. at 1648:18-25 (Solimon, A. Yepa).

454. [redacted] See Oct. 31 Tr. at 769:15-770:3 (Solimon, B. Shendo); id. at 771:7-775:13 (Solimon, B. Shendo); Nov. 1 Tr. at 995:25-999:1 (Solimon, Loretto); Map Utilized in Court by Witness Benny Shendo at 1 (undated), admitted December 13, 2018, at trial as Jemez Pueblo's Ex. PX 572 [redacted] Map Utilized in Court by Witness Thurman Loretto at 1 (undated), admitted December 13, 2018, at trail as Jemez Pueblo's Ex. PX 574 [redacted]

455. [redacted][153] See, e.g., Ferguson Report at 27-38 (cataloguing Jemez Pueblo religious societies' Valles Caldera use); High Altitude Adaptations at 116.

456. [redacted], e.g., Nov. 5 Tr. 1607:16-1613:11 (A. Yepa) [redacted]; id. at 1724:10-24 (V. Gachupin) [redacted]

[153]Jemez Pueblo asks the Court to conclude that [redacted] Jemez Pueblo's Proposed Findings ¶ 195, at 77 (citing Ferguson Report at 27-38). The cited evidence, however, does not support this proposed fact. See Ferguson Report at 28 [redacted]. The Court will not, therefore, adopt this proposed fact.

457. [redacted] See, e.g., Nov. 7 Tr. at 2191:4-23 (J. Madalena); Ferguson Report at 95.

458. [redacted] See, e.g., Nov 1 Tr. 876:20-22 (Richardson, P. Correo); id. at 879:19-880:25 (Richardson, P. Correo); Map Used in Court by Witness Pauline Correo at 1 (undated), admitted December 13, 2018, at trial as Jemez Pueblo's Ex. PX 573 [redacted]

459. [redacted] See, e.g., Nov 1 Tr. at 954:17-955:9 (Solimon, Loretto); id. at 960:18-963:15 (Solimon, Loretto); Ferguson Report at 28.

460. [redacted] See, e.g., Nov. 6 Tr. at 1876:5-14 (Ferguson); Ferguson Report at 102-04.

461. [redacted] See, e.g., Oct. 29 Tr. at 291:6-19 (P. Tosa); Ferguson Report at 90-91.

462. [redacted]

[redacted] See, e.g., Nov. 6 Tr. 1866:7-23 (Ferguson); id. at 1861:10-23 (Ferguson); Ferguson Report at 84-85, 87, 127.

463. [redacted] See, e.g., Oct. 29 Tr. at 222:1-223:14 (P. Tosa); Nov. 1 Tr. at 906:25-911:14 (Solimon, Loretto); Nov. 15 Tr. at 3637:16-3639:4 (C. Toya); Ferguson Report at 103; id. at 131.

464. [redacted] See, e.g., Nov. 1 Tr. at 909:7-12 (Solimon, Loretto); Ferguson Report at 130-31.

465. [redacted] See, e.g., Oct. 31 Tr. 766:5-22 (Shendo) [redacted]; Nov. 1 Tr. at 960:18-963:15 (Loretto); id. at 995:2-15 (Loretto); Nov. 6 Tr. at 1806-1809:7-2 (Ferguson); Nov. 15 Tr. at 3596:8-21 (C. Toya); Map Used in Court by Witness Thurman Loretto at 1 (undated), admitted December 13, 2018, at trial as Jemez Pueblo's Ex. PX 575 [redacted]; Ferguson Report at 103.

466. [redacted] See, e.g., Nov. 6 Tr. at 1872-1873:20-9 (Ferguson); Ferguson Report at 102-03.

467. [redacted] See, e.g., Nov. 1 Tr. at 968:12-25 (Loretto); Nov. 6 Tr. at 1877:11-20 (Ferguson); Nov. 20 Tr. at 4361:6-17 (V. Gachupin); id. at 4363:10-12 (V. Gachupin); id. at 4367:17-4370:1 (V. Gachupin); id. at Tr. 4369-4370:1 (V. Gachupin); Map Utilized in Court by Witness Virgil Gachupin at 1 (undated), admitted December 12, 2018, at trial as Jemez Pueblo's Ex. PX 581 ([redacted]); Ferguson Report at 112-13.

468. [redacted] See, e.g., Nov. 5 Tr. at 1491:1-12 (P. Chinana); 1873:10-20 (Ferguson); Nov. 15 Tr. at 3685:2-16 (C. Toya); id. at 3687:22-3689:9 (C. Toya); Map Used in Court by Witness Chris Toya at 1 (undated), admitted December 13, 2018, at trial as Jemez Pueblo's Ex. PX 579 ([redacted]); Ferguson Report at 111.

469. [redacted] See, e.g., Nov. 9 Tr at 2837:15-2838:15 (J. Gachupin); id. at 2842:12-2843:5 (J. Gachupin); Map Used in Court by Witness John Gachupin at 1 (undated), admitted

December 13, 2018, at trial as Jemez Pueblo's Ex. PX 578 [redacted]

470. [redacted] See, e.g., Nov. 6 Tr. at 1842:24-1843:4 (Ferguson); id. at 1867:8-16 (Ferguson); Ferguson Report at 125; id. at 87-88.

471. [redacted] See, e.g., Nov. 4 Tr. at 1356:9-18 (Whatley); Nov. 5 Tr. at 1649:15-1651:7 (A. Yepa); Nov. 20 Tr. at 4374:15-4375:1 (V. Gachupin); id. at 4302:19-4303:1 (D. Yepa); id. at 4307:12-17 (D. Yepa); Oct. 31 at 778:11-780:17 (B. Shendo); Map Utilized in Court by Witness Benny Shendo at 1 [redacted]; Nov. 1 Tr. at 995:25-999:2 (Loretto); Ferguson Report at 91-100.

472. [redacted] See, e.g., Oct. 29 Tr. 274:3-9 (P. Tosa); Oct. 31 Tr. at 768:15-769:3 (B. Shendo); id. at 794:18-24 (B. Shendo); Nov. 1 Tr. at 853:24-854:15 (P. Correo) [redacted] id. at 856:18-22 (P. Correo); id. at 876:15-22 (P. Correo); id. at 960-963:18-15 (Loretto); Nov. 5 Tr. at 1489:16-1490:4 (P. Chinana) [redacted] Nov. 7 Tr. at 2180:1-13 (J. Madalena); id. at 2214:23-

2216:13 (J. Madalena); Nov. 15 Tr. at 3691:15-3692:7 (C. Toya); Nov. 20 Tr. at 4295:17-4296:10 (D. Yepa); High Altitude Adaptations at 116-17.

473. [redacted] See, e.g., Nov. 15 Tr. at 3700:3-10 (C. Toya) [redacted]; High Altitude Adaptations at 122.

474. The Valles Caldera Trust and the National Park Service have both recognized that Jemez Pueblo has continuously used Redondo Peak and both have worked to incorporate Jemez Pueblo's Valles Caldera use into their respective resource management practices. See, e.g., Nov. 15 Tr. at 3646:18-3652:1 (Solimon, C. Toya); Dec. 5 Tr. at 5264:4-11 (Marinelli, Silva-Bañuelos)("Similar cultural connections, deep ties to the Preserve, strong interest in management and access issues at the Preserve under the Valles Caldera Trust. That was the early, early consultation meetings I had with Jemez Pueblo."); Meeting with Pueblo of Jemez and Valles Caldera Trust (dated March 11, 2014), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 345; Letter from Tim Haarmann to Governor Joshua Madalena (dated July 1, 2014), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 258 (expressing the Valles Caldera

Trust's interest in Jemez Pueblo's concerns regarding a proposed flux tower[154] on Redondito Peak).

475. When non-Indians request access to Redondo Peak, the National Park Service attempts to determine if the request will conflict with scheduled Pueblo activities, and, when conflict exists, the Valles Caldera National Preserve staff will request that the non-Indian either choose another day or forego activity that might disturb the Pueblo's Redondo Peak use.[155] See, e.g., Email Correspondence Between Stephen Fettig and Bob Parmenter re Access to Redondo During Jemez Ceremonies (dated June 7, 2014), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 097.

476. Valles Caldera National Preserve staff have consulted with Jemez Pueblo regarding public access to Redondo Peak and, on at least one occasion, discussed having a Jemez Pueblo

[154]"[A] flux tower typically extends past the top of the vegetation canopy at each site to allow sensors mounted at the top and along the tower to capture the full profile of atmospheric conditions from the top of the vegetation canopy to the ground." Met/Flux Towers, National Ecological Observatory Network, https://www.neonscience.org/data-collection/meteorology (last visited June 24, 2019).

[155]Jemez Pueblo asks the Court to find that, "[w]hen non-Jemez individuals request access to Redondo Mountain, the VCNP will attempt to determine if there are 'any conflicts with Pueblo activities' on Redondo," and that "the VCNP will ask the non-Jemez individual to request a different day to access Redondo." Jemez Pueblo's Proposed Findings ¶ 215, at 82 (quoting Email Correspondence Between Stephen Fettig and Bob Parmenter re Access to Redondo During Jemez Ceremonies at 2 (dated June 7, 2014), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 097). The cited evidence indicates, however, that, for Redondo Peak access purposes, Valles Caldera staff do not characterize individuals as Jemez or non-Jemez, but rather as Indian or non-Indian. See Email Correspondence Between Stephen Fettig and Bob Parmenter re Access to Redondo During Jemez Ceremonies at 1 ("We will do just as you say if we meet any Pueblo members."); id. at 2 ("[A]ny conflicts with Pueblo activities up there this Sunday?"). The Court will not adopt, therefore, the proposed fact as being specific to Jemez Pueblo.

member accompany non-Indian researchers to Redondo Peak's summit.[156] See, e.g., Jemez Tribal Consultation Meeting at 1 (dated Feb. 15, 2002), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 344 ("Recognizing Redondo has special meaning to the tribe, Rita indicated there was the possibilities of having an escort accompany the geologists to Redondo as needed."); Draft Meeting Summary, Valles Caldera Trust Meeting in Public at 12 (dated Feb. 27, 2010), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 363.

477. Jemez Pueblo has made at least thirteen requests to access Redondo Peak for pilgrimages and other ceremonial activities since the United States acquired the Valles Caldera in 2000,[157] and Valles Caldera National Preserve staff typically grants such requests. See, e.g.,

[156]Jemez Pueblo asks the Court to find that "[t]he VCNP asks Jemez members to escort non-Jemez individuals and groups to Redondo or serve as representatives because . . . it knows Jemez actually uses Redondo." Jemez Pueblo's Proposed Findings ¶ 216, at 82 (citing Jemez Tribal Consultation Meeting at 1 (dated Feb. 15, 2002), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 344; Draft Meeting Summary, Valles Caldera Trust Meeting in Public at 12 (dated Feb. 27, 2010), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 363). The cited evidence is prospective, however, and does not indicate, for example, whether Valles Caldera staff regularly ask for Jemez Pueblo escorts to Redondo Peak or whether such an escort has ever accompanied a non-Indian to Redondo Peak. See Jemez Tribal Consultation Meeting at 1 ("Recognizing Redondo has special meaning to the tribe, Rita indicated there was the possibilities of having an escort accompany the geologists to Redondo as needed."); Draft Meeting Summary, Valles Caldera Trust Meeting in Public at 12 ("Attendee Chris Toya added that the Jemez Pueblo needs to provide input into any development decision . . . ."). The Court, therefore, will not adopt the proposed fact.

[157]Jemez Pueblo's Valles Caldera use dramatically increased after the United States' purchase in 2000. See, e.g., Nov. 15 at 3722:2-3724:7 (Toya)(describing Toya's Valles Caldera visits, which, since 2000, increased in frequency from approximately once per year to ten per year); id. at 3729:6-3730:5 (Yepa)(affirming that Yepa's plant collection area expanded beyond Redondo Peak after 2000); Nov. 20 Tr. at 4359:3-4360:19; id. at 4366:14-4367:6 (Gachupin)(affirming that Gachupin's Valles Caldera visits increased after 2004). For example, before 2010, only small groups of Jemez Pueblo member used the Valles Caldera, see, e.g., Nov. 1 Tr. at 883:2-884:3 (Correo); Nov. 6 Tr. at 1912:20-23 (Ferguson)(affirming that, during the Dunigan era, Jemez Pueblo was unable to hold large gatherings in the Valles Caldera); Nov. 15

Access Request (dated May 23, 2007), admitted Oct. 29, 2018, at trial as Jemez Pueblo's Ex. PX 393; Access Request (dated Aug. 21, 2007), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 396; Access Request (dated Aug. 19, 2007), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 397; Access Request (dated June 17, 2008), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 399; Access Request (dated Sept. 10, 2010), admitted

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Tr. at 3747:22-3749:5 (Toya)(affirming that large gatherings commenced in 2010), yet after 2010, Jeme Pueblo hosted approximately four to ten large picnics as part of its effort to gain title to the Valles Caldera, see, e.g., Nov. 1 Tr. at 867:10-869:5 (Correo)(asserting that Jemez Pueblo hosted the picnics "to pray that we would get our land back"); Nov. 7 Tr. at 2220:20-2221:9 (Madalena); Letter to all Tribal Member Employees (dated Sept. 17, 2014), admitted November 9, 2018, at trial as United States' Ex. DX-UL (mandating tribal employee attendance at Valles Caldera gathering and tying attendance to Jemez Pueblo's efforts "to reclaim our aboriginal homeland"). Jemez Pueblo's litigation strategy since 2005 has involved, among other things, advancing its litigation position by: (i) promoting scholarship that describes Jemez Pueblo's Valles Caldera use; (ii) increasing Jemez Pueblo's Valles Caldera use; and (iii) drafting memoranda of understanding on three separate occasions. See, e.g., Nov. 5 Tr. at 1555:19-1557:6 (Marinelli, Chinana)(asserting that, while Jemez Pueblo members Yepa and Loretto were Valles Caldera Trust board members, "deep inside, within their heart, they're always pulling for Jemez . . . [a]nd every opportunity that they, I think, had, was to advocate for Jemez and get word across to the Trust that that's all Jemez land"); Nov. 9 Tr. at 2602:24-2604:23 (Madalena)(describing Madalena's letter seeking funding for litigation and stating that part of Jemez Pueblo's litigation strategy is "maintaining tribal involvement within the Valles Caldera Landscape at every opportunity"); Nov. 13 Tr. at 2981:17-2983:15 (Steffen)(stating that Jemez Pueblo did not disclose its litigation purpose when making requests from Valles Caldera National Preserve staff); Nov. 13 Tr. 2989:7-2992:1 (Steffen)(asserting that Jemez Pueblo did not disclose lobbying purpose for requesting Valles Caldera fieldhouse location maps); Nov. 14 Tr. at 3329:7-3330:24 (Steffen)(discussing Jemez Pueblo's 2012 Memorandum of Understanding); Nov. 15 Tr. at 3652:13-3653:16 (Toya)(affirming that Jemez Pueblo proposed Memorandums of Understanding on three occasions); Notes of Consultation Meeting between Notes of Meeting with Jemez Pueblo and Valles Caldera Trust (dated May 1, 2007), admitted October 29, 2018, at trial as United States' Ex. DX-KZ (reflecting Board Member Ray Loretto attendance as Jemez Director of Health and Human Services); Letter from D. Trujillo to Jemez (dated Aug. 19, 2013), admitted December 5, 2018, at trial as United States' Ex. DX-VJ (referencing Jemez Pueblo's 2010 and 2013 requests for information to support its expert witness work, including that of Jemez Pueblo expert witness John Roney); Email from Anastasia Steffen to Christopher Toya (dated June 24, 2014), admitted October 29, 2018, at trial as United States' Ex. DX-NV (providing Valles Caldera fieldhouse maps).

November 14, 2018, at trial as Jemez Pueblo's Ex. PX 403; Access Request (dated Oct. 1, 2010), admitted November 8, 2018, at trial as Jemez Pueblo's Ex. PX 404; Access Request (dated May 30, 2014), admitted November 8, 2018, at trial as Jemez Pueblo's Ex. PX 442; Access Request (dated July 18, 2014), admitted November 8, 2018, at trial as Jemez Pueblo's Ex. PX 465; Access Request (dated Dec. 3, 2014), admitted November 8, 2018, at trial as Jemez Pueblo's Ex. PX 506; Access Request (dated June 14, 2016), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 544; Access Request (dated July 20, 2016), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 550; Email Between Ana Steffen, Jorge Silva-Bañuelos, Chris Toya, and Jaime Loretto re: Redondo Access for 7/22/2014; 7/18/2014 at 1 (dated July 21, 2014), admitted November 14, 2018, at trial as Jemez Pueblo's Ex. PX 55 ("Here is a Redondo Access request letter for Tuesday. This kind of request is one that we've always granted.").

478. Jemez Pueblo has submitted to the Valles Caldera National Preserve staff more formal and informal access requests than any other Pueblo or Tribe. See, e.g. Nov. 14 Tr. at 3267:9-12 (Steffen)(asserting that, during Steffen's tenure, Jemez Pueblo has made more Valles Caldera access requests than any other Tribe); Dec. 13 Tr. at 5429:23-5430:4 (Trujillo)(asserting that from 2002 through 2014, Santa Clara Pueblo requested Valles Caldera access only twice per year and only after the Los Conchos fire to access Santa Clara Pueblo's easement area); id. at 5432:3-12 (Trujillo)(asserting that, from 2002 through 2014, Jemez Pueblo requested Valles Caldera access ten or fifteen times more frequently than Santa Clara Pueblo); id. at 5466:6-5469:19 (Silva-Bañuelos)(discussing numerous Jemez Pueblo access requests).

479. Jemez Pueblo members park near Redondo Meadows to access [redacted] See, e.g., Oct. 29 Tr. at 214:22-216:10 (P.

Tosa); Map used in Court by Witness Paul Tosa at 1 [redacted].

480. [redacted] See, e.g., Nov. 6 Tr. at 1870:19-1871:11 (Ferguson); id. at 1876:18-1877:1 (Ferguson); Ferguson Report at 101-02; id. at 116-17; id. at 129-30.

481. Jemez Pueblo uses a trail that [redacted] See, e.g., Nov. 6 Tr. at 1868:24-1869:14 (Ferguson); Ferguson Report at 125-26; High Altitude Adaptations at 110-11; Designation of Deposition Testimony -- Margaret Loretto at 23:18-24:9 (M. Loretto); id. at 30:22-24 (M. Loretto).

482. [redacted] See, e.g., Nov. 1 Tr. at 1072:19-25 (Weslowski); High Altitude Adaptations at 108.

483. [redacted] See, e.g., Nov. 6 Tr. at 1871:19-1872:4 (Ferguson); Ferguson Report at 113.

484. The Valles Caldera Trust and the National Park Service have consulted with Jemez Pueblo regarding Jemez Pueblo's architectural and archaeological interests in the Banco Bonito based on historic use and an ongoing relationship to the area.[158] See, e.g., Nov. 15 Tr. at 3674:22-

[158]Jemez Pueblo asks the Court to find that "[t]he VCNP has acknowledged Jemez's continuous use of Banco Bonito and the relationship Jemez has to the area. The VCNP asks Jemez members to escort or serve as representatives for the area . . . and asks for Jemez's help in interpreting architectural and other archaeological features in Banco Bonito." Jemez Pueblo's

3676:13 (C. Toya); Draft Letter to Chris Toya from Dennis Trujillo re: Letter of Support for your Grant Proposal to the NMAC [New Mexico Archaeological Council] Regarding Collaborative Project "Experimental Gardening on Banco Bonito" at 1 (dated April 25, 2012), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 334.

485. The Jemez Pueblo [redacted][159] [redacted] See, e.g., Nov. 6 Tr. at 1828:20-25 (Ferguson); id. at 1830:7-9 (Ferguson); id. at 1837:14-22 (Ferguson); Nov. 7 Tr. at 2191:4-23 (J. Madalena); Ferguson Report at 105-08.

Proposed Findings ¶ 228, at 86 (citing Nov. 15 Tr. at 3674:22-3676:13 (C. Toya); Draft Letter to Chris Toya from Dennis Trujillo re: Letter of Support for your Grant Proposal to the NMAC [New Mexico Archaeological Council] Regarding Collaborative Project "Experimental Gardening on Banco Bonito" at 1 (dated April 25, 2012), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 334). Although the cited evidence supports Jemez Pueblo's ongoing interest in the Banco Bonito, it does not discuss whether Jemez Pueblo has continuously used those lands, or whether Valles Caldera National Preserve staff have sought any assistance from Jemez Pueblo regarding Banco Bonito access or management. See Nov. 15 Tr. at 3674:22-3676:13 (C. Toya)(discussing a letter of support from the Valles Caldera Trust regarding Jemez Pueblo's efforts to secure funding for a proposal to study Banco Bonito farming techniques); Draft Letter to Chris Toya from Dennis Trujillo re: Letter of Support for your Grant Proposal to the NMAC [New Mexico Archaeological Council] Regarding Collaborative Project "Experimental Gardening on Banco Bonito" at 1 (providing support, per Jemez Pueblo's request, for Jemez Pueblo's grant proposal to study Banco Bonito farming techniques). The Court will not adopt, therefore, the proposed fact.

159 [redacted] See, e.g., Nov. 7 Tr. at 2095:21-2096:7 (Marinelli, Ferguson); id. at 2096:21-2097:2 (Marinelli, Ferguson); id. at 2098:1-2099:11 (Marinelli, Ferguson); id. at 2116:17-2117:6 (Marinelli, Ferguson).

486. San Antonio Creek follows the Valle San Antonio along the Valles Caldera's northern section and traverses through many areas significant to Jemez Pueblo, [redacted] See, e.g., Nov. 7 Tr. at 2190:8-21 (J. Madalena); Ferguson Report at 102.

487. [redacted][160] See, e.g., Nov. 6 Tr. at 1839:8-15 (Ferguson); Ferguson Report at 110; id. at 130.

488. [redacted] See, e.g., Nov. 6 Tr. at 1836:15-19 (Ferguson); id. at 1837:6-1838:2 (Ferguson); Nov. 7 Tr. at 2096:8-2097:2 (Marinelli, Ferguson); Ferguson Report at 105-07.

489. [redacted][161] E.g., Nov. 6 Tr. at 1836:15-19 (Ferguson); Ferguson Report at 106-07.

[160] Ferguson does not know [redacted]. See, e.g., Nov. 7 Tr. at 2099:12-24 (Marinelli, Ferguson); Ferguson Report at 110.

[161] Ferguson testified that [redacted] See Nov. 7 Tr. at 2096:8-2097:2 (Marinelli, Ferguson).

490. [redacted] See, e.g., Nov. 6 Tr. at 1838:3-18 (Ferguson); Ferguson Report at 108.

491. [redacted] See, e.g., Nov. 6 Tr. at 1835-1836:18-11 (Ferguson); Ferguson Report at 106.

492. [redacted] See, e.g., Nov. 6 Tr. at 1838:24-1839:12 (Ferguson); Ferguson Report at 110; id. at 115-16.

493. To reach Valle San Antonio, the Jemez Pueblo members [redacted] See, e.g., Nov. 5 Tr. at 1693-1695:13-7 (G. Gachupin); Ferguson Report at 104-05; id. at 115-16; id. at 129.

494. [redacted]. See, e.g., Nov. 1 Tr. at 981:1-14 (Loretto); Ferguson Report at 114-16; Map Utilized in Court by Witness Thurman Loretto at 1 [redacted].

495. Jemez Pueblo members use a trail that [redacted] See, e.g., Ferguson Report at 101; id. at 104-105.

496. [redacted] See, e.g., Oct. 29 Tr. at 244:3-19 (P. Tosa); Map Used in Court by Witness Paul Tosa at 1 [redacted] Ferguson Report at 115; High Altitude Adaptations at 110.

497. Jemez Pueblo members value San Antonio Mountain as a hunting location, because nearby salt-rich pumice stones attract deer. See, e.g., Oct. 29 Tr. at 238:7-14 (P. Tosa); Ferguson Report at 115-16.

498. Jemez Pueblo's place names for Valle Toledo and Cerro del Abrigo are [redacted]. See, e.g., Nov. 6 Tr. at 1852:2-1853:9 (Ferguson); id. at 1854:16-21 (Ferguson); Ferguson Report at 89; id. at 111; id. at 118.

499. Jemez Pueblo members hunt [redacted] See, e.g., Nov. 5 Tr. at 1496:3-18 (P. Chinana); Nov. 6 Tr. at 1850:17-18 (Ferguson); id. at 1851:9-15 (Ferguson); Ferguson Report at 89; id. at 123.

[162] [redacted] E.g., Nov. 7 Tr. at 2100:1-23 (Marinelli, Ferguson); Ferguson Report at 85; id. at 111.

500. Jemez Pueblo members fish [redacted] See, e.g., Nov. 1 Tr. at 847-848:20-4 (P. Correo); Map Used in Court by Witness Pauline Correo at 1 (outlining in purple the location where Correo fished with her father).

501. [redacted] See, e.g., Nov. 6 Tr. at 1853:22-1854:9 (Ferguson); Ferguson Report at 118.

502. [redacted] See, e.g., Nov. 6 Tr. at 1855:9-25 (Ferguson); Ferguson Report at 90.

503. Jemez Pueblo's place name for Cerro del Medio is [redacted] E.g., Nov. 6 Tr. at 1858:9-22 (Ferguson); Ferguson Report at 125.

504. Jemez Pueblo members make pilgrimages to [redacted] See, e.g., Nov. 6 Tr. at 1857:3-8 (Ferguson); Nov. 7 Tr. at 2180:14-20 (J. Madalena); Ferguson Report at 88-90.

505. [redacted] See, e.g., Nov. 4 Tr. at 1164:20-1165:16 (Whatley) [redacted] Nov. 7 Tr. at 2180:21-2181:8 (J. Madalena); id. at 2183:1-23 (J. Madalena); id. at 2184:19-25 (J. Madalena).

506. [redacted] See, e.g., Nov. 4 Tr. at 1305:3-8 (Whatley) [redacted] Nov. 6 Tr. at 1827:21-1828:6 (Ferguson); id. at 1858:9-18 (Ferguson); id. at 1859:8-18 (Ferguson); Ferguson Report at 88; id. at 129.

507. [redacted] E.g., Oct. 29 Tr. at 234:13-17 (P. Tosa); id. at 241:19-242:20 (P. Tosa); Nov. 6 Tr. at 1856:10-1857:10 (Ferguson); Ferguson Report at 88-90; Map Used in Court by Witness Paul Tosa at 1 (outlining in blue Obsidian Valley).

508. [redacted] See, e.g., Nov. 6 Tr. 1823:21-1824:4 (Ferguson); id. at 1843:14-22 (Ferguson); id. at 1861:24-1862:9 (Ferguson); Ferguson Report at 85; id. at 124; id. at 128.

509. Jemez Pueblo's place name for the Valle Grande is [redacted] E.g., Nov. 6 Tr. at 1859:24-1861:5 (Ferguson); Ferguson Report at 83.

510. [redacted] E.g., Oct. 29 Tr. at 232:1-234:12 (P. Tosa); id. at 235:1-14 (P. Tosa); Ferguson Report at 129.

511. [redacted] See, e.g., Nov. 6 Tr. at 1859:22-1860:7 (Ferguson); Ferguson Report at 83; id. at 112; id. at 123; High Altitude Adaptations at 115.

512. [redacted] See, e.g., Nov. 1 Tr. at 851:3-11 (P. Correo); id. at 890:20-25 (P. Correo); Nov. 6 Tr. at 1865:20-1866:6 (Ferguson); Ferguson Report at 84.

513. [redacted] See, e.g., Nov. 6 Tr. at 1845:13-24 (Ferguson); Ferguson Report at 121.

514. Valles Caldera National Preserve staff have consulted with Jemez Pueblo regarding Jemez Pueblo's interest in La Jara Creek and Upper Jaramillo Creek, and on at least one occasion conducted a field visit with Jemez Pueblo to inspect sites for a scientific device's proposed installation.[163] See, e.g., Nov. 15 Tr. at 3641:21-3646:17 (C. Toya); Email Between Ana Steffen

[163]Jemez Pueblo asks the Court to find that "[t]he VCNP acknowledges Jemez's actual and continuous use of the Valle Grande and has incorporated Jemez's concerns into its management practices. . . . . Jemez members will conduct field visits with VCNP staff and typically the VCNP will only consult Jemez for these types of specific location based projects." Jemez Pueblo's Proposed Findings ¶ 272, at 99 (citing Nov. 15 Tr. at 3641:21-3646:17 (C. Toya); Email Between Ana Steffen and Bob Parmenter re: Jemez Pueblo Concerns about Future Installations on Redondo and at Springs at 1-2 (dated Oct. 23, 2012), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. 298). The cited support establishes, however, merely that C. Toya is unaware whether Tribes other than Jemez expressed concerns regarding the Valles Caldera Trust's proposed device installation at springs on the La Jara and Upper Jaramillo creeks; the evidence does not support the proposition that other Tribes were unconcerned, that the Valles Caldera National Preserve staff did not consult with other Tribes, or that Valles Caldera National Preserve staff consult only with Jemez Pueblo when considering specific-location based projects. See, e.g., Nov. 15 Tr. at 3646:14-17 (Solimon, C. Toya)(affirming that Toya does not "have knowledge of any other Indian group outside of Jemez responding to th[e] flume installation"); Email Between Ana Steffen and Bob

and Bob Parmenter re: Jemez Pueblo Concerns about Future Installations on Redondo and at Springs at 1-2 (dated Oct. 23, 2012), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. 298.

515. Jemez Pueblo's place name for South Mountain is [redacted] See, e.g., Nov. 13 Tr. at 3700:11-16 (C. Toya);

516. [redacted] See, e.g., Nov. 6 Tr. at 1864:23-1865:23 (Ferguson); Ferguson Report at 81-83.

517. [redacted] See, e.g., Nov. 6 Tr. at 1864:23-1865:6 (Ferguson); Ferguson Report at 104.

518. [redacted] See, e.g., Oct. 29 Tr. at 240:10-17 (P. Tosa); Nov. 6 Tr. at 1862:10-20 (Ferguson); Ferguson Report at 85-86.

519. Jemez Pueblo members use a trail that runs along [redacted] See, e.g., Nov. 6 Tr. at 1864:14-19 (Ferguson); Ferguson Report at 81.

Parmenter re: Jemez Pueblo Concerns about Future Installations on Redondo and at Springs at 1-2. The Court, therefore, will not adopt the proposed fact.

520. Between South Mountain and Redondo Mountain is [redacted] See, e.g., Nov. 6 Tr. at 1865:16-19 (Ferguson); Ferguson Report at 109.

521. [redacted][164] [redacted][165] See, e.g., Oct. 29 Tr. at 221:22-25 (P. Tosa); id. at 244:2-19 (P. Tosa); Nov. 6 Tr. at 1862:23-1863:16 (Ferguson); Map Used in Court by Witness Paul Tosa at 1 ([redacted]); Ferguson Report at 108-09; id. at 114.

522. The peaks of Cerro Seco, Cerros Santa Rosa, and Cerro San Luis, which are volcanic domes located proximate to the Valles Caldera's center, [redacted] See, e.g., Nov. 6 Tr. at 1819:4-9 (Ferguson); Nov. 8 Tr. at 2488:3-2494:12 (J. Madalena); Diagram Drawn by Governor J. Madalena at 1 (undated), admitted November 8, 2018, at trial as Jemez Pueblo's Ex. PX 558 (identifying the peaks of Cerro Seco, Cerros Santa Rosa, and Cerro San Luis within the Valles Caldera); Ferguson Report at 100; id. at 107-08; id. at 128.

[164]Ferguson does not know whether [redacted] See, e.g., Nov. 7 Tr. at 2098:9-2099:11 (Marinelli, Ferguson); Ferguson Report at 108.

[165]Ferguson does not know how frequently [redacted] See, e.g., Nov. 7 Tr. at 2100:25-2102:2 (Marinelli, Ferguson); Ferguson Report at 114.

523. [redacted]

524. Jemez Pueblo members leave offerings at [redacted]. See, e.g., Oct. 29 Tr. at 244:3-19 (P. Tosa); Nov. 6 Tr. at 1819:1-14 (Ferguson); id. at 1821:7-13 (Ferguson); Map Used in Court by Witness Paul Tosa at 1 [redacted]; Ferguson Report at 117.

14. Tribal Entities Have Expressed Disparate Sentiments Regarding Valles Caldera Ownership.

525. In November, 1997, the National Congress of American Indians ("NCAI") passed a resolution supporting "the restoration [to Santa Clara] of a minimum of the 9,100 acre area in the northeast corner of Baca Location #1," which includes approximately 3,100 acres of lands that are presently within the Valles Caldera, and that the United States should acquire the remaining lands. Santa Clara Restoration Assessment at 54-55 (including facsimile of NCAI Resolution # SFE-97-103 entitled Restoration of Santa Clara Pueblo Ancestral, Spanish Grant, and Crucial Headwater Lands from the "Baca Location #1"). See, e.g., id. at 25 (mapping areas Santa Clara sought to recover); id. at 48 ("[N]o other Pueblo or tribe has similarly supported claims to land within the Baca Location #1. This uniqueness is underscored by the fact that Santa Clara Pueblo is the only tribe . . . to get the support of the [NCAI] . . . for the restoration of land in the Baca Location #1."); id. at 54-55 (referencing text from NCAI resolution supporting restoration of Santa Clara Pueblo lands within Baca Location No. 1).

526. In 2001, the Native American Rights Fund ("NARF") refused to represent Jemez Pueblo in Jemez Pueblo's effort to obtain title to Redondo Peak, because NARF recognized that other Tribes use Redondo Peak. See, e.g., Pueblo of Jemez 2001 Annual Report at 9 (dated 2001), admitted November 5, 2018, at trial as United States' Ex. DX-UG-9 ("NARF has a policy where it will not litigate cases where Indian against Indian disputes are involved.").

527. In 2001, the Eight Northern Pueblos Council passed -- without referencing or seeking permission from Jemez Pueblo -- a resolution asserting that multiple Pueblos have occupied and used the Valles Caldera for hundreds of years. See, e.g., Nov. 19 Tr. at 4252:3-4254:9 (Marinelli, D. Yepa)(affirming that the Eight Northern Indian Pueblos Council did not seek Jemez Pueblo's permission before passing its resolution regarding multiple Pueblos' Valles Caldera use); Eight Northern Indian Pueblos Council, Inc. Resolution No. 05-13-01 at 2 (dated May 13, 2001), admitted October 29, 2018, at trial as United States' Ex. DX-IM ("WHEREAS, the Pueblo tribes of New Mexico have occupied and utilized these lands and natural resources since time immemorial . . . the Eight Northern Indian Pueblos . . . hereby requests that the Valles Caldera Trust directly consult with each of the New Mexico Pueblo Tribes . . . .").

528. In 2004, Jemez Pueblo Governor Chinana and Zia Pueblo Governor Pino signed a Memorandum of Understanding in which Zia Pueblo agreed to support Jemez Pueblo's Valles

Caldera claim;[166] however, the Zia Pueblo Trial Council never ratified the memorandum,[167] which Paragraph 11 explicitly requires.[168] See, e.g. Nov. 7 Tr. at 2030:25-2035:16 (Lucero); Nov. 5 Tr.

[166]The unratified memorandum of understanding also commits Jemez Pueblo to support Zia Pueblo's efforts to acquire land within the Ojito Wilderness Study Area, which is outside the Valles Caldera. See, e.g., Memorandum of Understanding -- Pueblo of Jemez and Pueblo of Zia as to Possible Overlapping Land Claims at 1 ("Zia has established aboriginal Indian title to certain lands . . . amounting to approximately 24,000 acres of lands in and around the Ojito Wilderness Study Area."); Nov. 7 Tr. at 2068:5-25 (J. Lucero). Zia Pueblo ultimately recovered its aboriginal lands within the Ojito Wilderness Study Area, which other Tribes, including Jemez Pueblo, supported despite considering those lands sacred. See, e.g., Nov. 5 Tr. at 1508:22-1509:8 (Chinana); Nov. 7 Tr. at 2068:13-21 (J. Lucero); id. at 2071:25-2072:18 (J. Lucero).

[167]Jemez Pueblo asks the Court to find that Zia Pueblo "Governor Peter Pino had the authority to bind the Pueblo of Zia to the 2004 Zia MOU." Jemez Pueblo's Proposed Findings ¶ 619, at 196 (citing Nov. 7 Tr. at 2065:20-2068:4 (J. Lucero)). The citied support, however, asserts merely that, in Lucero's opinion, Pino had the authority to sign the memorandum of understanding; the evidence does not vitiate the memorandum of understanding's requirement that Jemez Pueblo's and Zia Pueblo's respective governing bodies ratify attached resolutions supporting the commitments that the memorandum sets forth. See, e.g., Nov. 7 Tr. at 2065:20-2068:4 (J. Lucero); Memorandum of Understanding -- Pueblo of Jemez and Pueblo of Zia as to Possible Overlapping Land Claims at 4 (dated Feb. 10, 2004), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 9 (asserting that "Jemez and Zia hereby assure each other that the undersigned representatives of Jemez and Zia have been duly authorized by the attached resolutions of the respective governing bodies of Jemez and Zia to act on behalf of and legally bind the Pueblos of Jemez and Zia," but not attaching said resolutions). The Court, therefore, will not adopt the proposed fact.

[168]The United States asks the Court to find that "Jemez repeatedly violated its representation in Paragraph 5 of the 2004 MOU to respect Zia use of the Preserve lands." United States' Proposed Findings ¶ 491, at 140 (citing Nov. 20 Tr. at 4344:2-13 (Yepa); Nov. 5 Tr. at 1511:17-25 (Chinana); id. at 1515:8-1517:13 (Marinelli, Chinana)). The cited evidence merely describes, however, hypothetical behavior that Jemez Pueblo would find objectionable and prospective guarantees should Jemez Pueblo acquire the Valles Caldera, which it has not accomplished and therefore cannot violate. See, e.g., Nov. 20 Tr. at 4344:2-13 (Yepa) [redacted] id. at 1515:8-1517:13 (Marinelli, Chinana)(affirming that Jemez Pueblo would object to Zia Pueblo's Valles Caldera use in a manner that Jemez Pueblo would find disrespectful if Zia Pueblo had similarly objected to Jemez Pueblo's use). The Court, therefore, will not adopt the proposed fact.

at 1517:14-1518:5 (Chinana); Nov. 19 Tr. at 4330:1-6 (D. Yepa); id. at 4340:18-4342:2 (D. Yepa); Memorandum of Understanding -- Pueblo of Jemez and Pueblo of Zia as to Possible Overlapping Land Claims at 1-4 (dated Feb. 10, 2004), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 9; Jemez Pueblo Tribal Council Meeting Minutes at 3 (dated June 15, 2012), admitted November 9, 2018, at trial as United States' Ex. DX-UK ("Zia Governor is ok with [resolution] but he need[s] to take it to his Council. We have animosity from Zia Pueblo but it is not coming from Jemez."); Jemez Pueblo Tribal Council Resolution 2012-06 at 2-5 (dated June 15, 2012), admitted November 9, 2018, at trial as United States' Ex. DX-UM (providing draft Jemez Pueblo resolution attempting to implement 2004 Memorandum of Understanding regarding Zia Pueblo's support for Jemez Pueblo's Valles Caldera claim).

529. Before 2004, Jemez Pueblo recognized that Zia Pueblo had a claim to the Valles Caldera. See, e.g., Nov. 5 Tr. at 1513:5-1514:14 (Marinelli, Chinana)(affirming that Jemez Pueblo attempted to settle through the Memorandum of Understanding competing land claims with Zia Pueblo); Memorandum of Understanding at 2 (referring to the Memorandum of Understanding as an "Agreement of Compromise and Settlement"); Transition Meeting of 2004 Tribal Administration with 2005 Tribal Administration -- Chinana Outgoing Governor at 6 (dated Jan. 3, 2005), admitted November 5, 2018, at trial as United States' Ex. DX-UF ("Partnership made included Jemez, Zia and Santa Ana. We need to have both tribes relinquish any claims or interest in this area and strategically work toward exclusive rights/access.").

530. After 2010, Jemez Pueblo recognized that other Tribes have claims to the Valles Caldera averse to Jemez Pueblo's claim. See, e.g., Nov. 9 Tr. at 2597:3-9 (Madalena); Nov. 9 Tr. at 2611:3-2613:2 (Marinelli, Madalena)(stating that the Zia Pueblo Governor left a 2012 AIPC

meeting rather than sign a resolution supporting Jemez Pueblo's Valles Caldera claim); Valles Caldera Campaign Plan at 3 (dated Aug. 23, 2010), admitted November 9, 2013, at trial as United States' Ex. DX-UJ (asserting that "[o]ther tribes who may also have claim to the Valles Caldera" might "be the biggest obstacle to the Valles Caldera plan"); Jemez Pueblo Tribal Council Meeting Minutes at 3 ("Zia governor is ok with [resolution] but he need[s] to take it to his Council. We have animosity from Zia Pueblo but it is not coming from Jemez."); Email from Lynn Toledo to Governor Madalena at 1 (dated Dec. 4, 2012), admitted November 9, 2018, at trial as United States' Ex. DX-UN (stating that, through eleven Tribes voting for the AIPC resolution, "Tribes have relinquished rights to the Valles Caldera," and that the vote caught the "Pueblo of Zia . . . off guard"); Jemez Pueblo Transition Meeting 2012-2013 Administration Minutes at 1 (dated Jan. 16, 2013), admitted November 9, 2018, at trial as United States' Ex. DX-UO ("Zia Pueblo: not supporting Jemez' claim of the [Valles Caldera]."); Jemez Pueblo Semi-Annual Report at 2 (dated 2013), admitted November 9, 2018, at trial as United States' Ex. DX-UP ("Zia Pueblo: not supporting Jemez' claim of the [Valles Caldera].").

531. Jemez Pueblo initially did not obtain an All Pueblo Council of Governor's resolution supporting its Valles Caldera claim, because, at a minimum, Jemez Pueblo lacked Santa Clara Pueblo's and San Ildefonso Pueblo's support. See, e.g., Nov. 9 Tr. at 2756:14-2762:4 (Marinelli, Suina)(asserting that Santa Clara and San Ildefonso governors "were not comfortable to give the support" to Jemez Pueblo in 2014); Dec. 3 Tr. at 5123:9-24 (Chavarria)("[V]arious other tribes, the pueblos had concerns so [the resolution] was tabled, and Jemez Pueblo was asked to meet with the tribes that had concerns regarding the concerns about the resolution."); All Pueblo Council of Governors Meeting Minutes at 1, 3 (dated Aug. 20, 2014), admitted November 9, 2018,

at trial as United States' Ex. DX-UT (indicating that only thirteen of fifteen participating Pueblo governors present at the meeting voted for Jemez Pueblo's Valles Caldera resolution).

532. Only thirteen of the seventeen Pueblo governors present at the August 20, 2014, All Pueblo Council of Governors meeting voted in favor of Jemez Pueblo's Valles Caldera resolution, and at least two governors abstained from voting.[169] See, e.g., Nov. 9 Tr. at 2815:15-2816:5 (Marinelli, Suina); Nov. 9 Tr. at 2622:22-2625:16 (Marinelli, Madalena)(asserting that then-Jemez Pueblo Governor Joshua Madalena could not remember which Pueblo governors voted in favor of Jemez Pueblo's Valles Caldera resolution); All Pueblo Council of Governors Meeting Minutes at 1, 3 (indicating that fifteen governors voted on the resolutions considered immediately preceding and following Jemez Pueblo's Valles Caldera resolution).

533. Pueblos often sign resolutions to support other Pueblos; for example, Jemez Pueblo's revised resolution states that Jemez Pueblo has continuously used and occupied lands, including the area that the Valles Caldera encompasses, yet then-Santa Clara Pueblo Governor Michael Chavarria did not know whether Jemez Pueblo actually used the Valles Caldera and had never encountered a Jemez Pueblo member on his many visits to those lands. See, e.g., Nov. 19 Tr. at 4252:3-4254:9 (Marinelli, D. Yepa)(asserting that several of the Eight Northern Pueblos

[169]Santa Clara Pueblo Governor Chavarria supported Jemez Pueblo's All Pueblo Council of Governors resolution in an effort to protect Santa Clara Pueblo's interests in accessing the Valles Caldera, and, even though he supported Jemez's revised resolution at the August 20, 2014, AIPC meeting, Chavarria argued that "each Pueblo should meet with the Governor of Jemez to discuss concerns and usage of the Valles Caldera." E.g., Dec. 3 Tr. at 5124:5-14 (Marinelli, Chavarria). See also id. at 5126:21-5127:16 (Marinelli, Chavarria)("I had concerns, but I thought with that . . . other pueblos may continue any traditional [Valles Caldera] activities. I felt our access would be honored by the Pueblo of Jemez. So I felt that I didn't need to seek Tribal Council input on that."); id. at 5131:10-5132:5 (Marinelli, Chavarria); All Pueblo Council of Governors Meeting Minutes at 3.

supported other Pueblos who claimed to "occupy and utilize the Valles Caldera for a long time") Dec. 3 Tr. at 5124:17-5125:10 (Marinelli, Chavarria); Eight Northern Indian Pueblos Council, Inc. Resolution No. 05-13-01 at 2; Designation of Deposition Testimony -- Allen Gachupin at 50:17-51:11 (Gachupin)(asserting that Southern Pueblo Council resolutions typically "passed unanimously" because of "a sense of unity among the tribes . . . to support each other").

534. To obtain other Pueblo's support for its Valles Caldera claim, Jemez Pueblo argued that its claim would enable other Pueblos to obtain other lands in the future and that it would support any Pueblo's efforts to that end. See, e.g., Letter from Joshua Madalena to Ernest Lujan, Pueblo of Santa Ana, with Attachment at 1 (dated March 29, 2012), admitted October 29, 2018, at trial as United States' Ex. DX-MV ("In exchange for giving our support to your effort to acquire lands from BLM, we likewise request . . . your support . . . and ask that your Pueblo agree not to assert . . . any claim of ownership, rights, or interests to lands and natural resources Santa Ana may have within the VCNP."); Draft Letter from Governor Madalena to Other Tribes (dated Feb. 28, 2012), admitted November 9, 2018, at trial as United States' Ex. DX-UV (stating that Jemez Pueblo's success in its Valles Caldera litigation would "potentially revitalize the doctrine of aboriginal Indian title. This means that any level of success . . . will be very helpful to other tribes seeking to recover ancestral lands"); Nov. 9 Tr. at 2635:1-20 (Marinelli, Madalena)(affirming that Madalena discussed potential, successful Valles Caldera-litigation benefits with other Tribes during meetings); Nov. 9 Tr. at 2767:4-12 (Marinelli, Suina)(stating that Jemez Pueblo told other Tribes that they should support Jemez Pueblo's Valles Caldera claim, because Jemez Pueblo was the only Tribe that sued before the Quiet Title Act's statute of limitations expired, and that, if other

Tribes provided information regarding their Valles Caldera use, "it might make it impossible for Jemez' case to succeed").

535. Cochiti Pueblo supports Jemez Pueblo's Valles Caldera claim.[170] See, e.g., Nov. 9 Tr. at 2688:23-2690:3 (Suina)[171]; Pueblo de Cochiti Tribal Council Resolution No. 2017-06[172] at

[170]Rather than agree with Jemez Pueblo that Jemez Pueblo is the Valles Caldera's exclusive aboriginal owner, Cochiti Pueblo required "assurance from Jemez that Jemez would continue to allow" Cochiti Pueblo "access to the preserve" to "maintain its traditional uses," including continuing to use Redondo Peak, before passing a resolution supporting Jemez Pueblo's litigation position. Nov. 19 Tr. at 4267:13-4268:15 (Marinelli, Suina). Jemez Pueblo Governor Joseph Toya and former Jemez Pueblo Governor and Cochiti Attorney David Yepa provided such assurances; however, both men believe that other Tribes did not use Redondo Peak and both are opposed to other Tribes using Redondo Peak. See, e.g., Nov. 7 Tr. at 2128:8-2136:25 (Toya)(Gov. Toya video admitted); Nov. 9 Tr. at 2706:7-2707:14 (Suina)(stating that Jemez Pueblo "assured" Cochiti Pueblo that "they had no plans" to engage in economic development); id. at 2763:12-2767:3 (Suina)(discussing Cochiti Pueblo's demands and Jemez assurances regarding Valles Caldera access); id. at 2778:25-2780:18 (Suina)(asserting that Yepa made assurances regarding Cochiti Pueblo's Valles Caldera access); Nov. 19 Tr. at 4246:7-25 (Yepa)("[Yepa's] personal belief is [that] Redondo is and always has been exclusively Jemez."); id. at 4272:10-4273:23 (Marinelli, Yepa)(affirming Yepa's understanding that Cochiti Pueblo could not build a shrine on Redondo Peak); Excerpts from Joseph Toya Deposition at 116:20-117:10 (undated), admitted November 7, 2018, at trial as United States' Ex. DX-UH (stating that Jemez Pueblo would never let other Tribes hunt in the Valles Caldera or visit Redondo Peak); id. at 167:9-168:1 (affirming that Toya did not tell other Tribes that he would object to them going to Redondo Peak); id. at 189:17-191:19 (affirming that Toya would object to other Tribes going to Redondo Peak); Jemez Pueblo Request for Return of the Valles Caldera, White House Briefing Summary at 8 (dated Aug. 25, 2014), admitted October 29, 2018, at trial as United States' Ex. DX-OA (proposing building a "resort lodge" in the Valles Caldera).

[171]The Cochiti Pueblo Tribal Council authorized Dr. Joseph Suina, a Cochiti Pueblo Tribal Councilman and former Cochiti Pueblo governor, to testify at trial in support of Jemez Pueblo's Valles Caldera claim. See Tr. Nov. 9 Tr. at 2680:1-19 (Suina). Suina based his assertions regarding Jemez Pueblo's Valles Caldera use on Jemez Pueblo's reputation within the Cochiti Pueblo community regarding such use, which existed before 2000. See, e.g., Nov. 9 Tr. at 2685:4-20 (Suina); id. at 2717:15-18 (Suina); id. at 2718:7-12 (Suina).

[172]Ten Cochiti Pueblo Tribal Council member voted for Cochiti Resolution 2017-06 and zero opposed. See Pueblo de Cochiti Tribal Council Resolution No. 2017-06 at 3 (dated April 4, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 205.

2 (dated April 4, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 205 (resolving that Cochiti Pueblo "supports the Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based . . . Jemez's continuing aboriginal Indian title . . . ."); id. ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to present."); id. ("[A]t all times the lands aboriginally used by the Pueblo de Cochiti within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated."[173]); id. at 2 ("[T]he court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo de Cochiti.").

536. Isleta Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Isleta Tribal Council Resolution No. 2017-267 at 2 (dated Oct. 16, 2017), admitted October 31, 2018, at trial as United States' Ex. PX 206 (resolving that Isleta Pueblo "support[s] the Pueblo of

[173]The United States asks the Court to find that Jemez Pueblo "negotiated, at a minimum, the Cochiti resolution to prohibit other tribes from testifying that they 'traditionally used the Valles Caldera and that Jemez's use has, therefore, not been exclusive at any time.'" United States' Proposed Findings ¶ 505, at 146 (citing Nov. 19 Tr. at 4270:13-22 (Marinelli, Yepa)). The cited evidence, however, merely describes conduct that one Jemez Pueblo member would consider as contrary to the resolved decision to support Jemez Pueblo; it does not suggest a motive for Jemez Pueblo seeking the resolution. See Nov. 19 Tr. at 4270:13-22 (Marinelli, Yepa)(affirming only that Yepa would consider as a violation of Cochiti Pueblo's resolution testimony "that Cochiti has traditionally used the Valles Caldera and that Jemez's use has, therefore, not been exclusive at any time"). The Court, therefore, will not adopt the proposed fact.

Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land within the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those land"); id. at 2 (resolving that "the court in the Jemez lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Isleta").

537. Six Isleta Pueblo Tribal Council members voted for Isleta Resolution 2017-267, and no members opposed or abstained. See Pueblo of Isleta Tribal Council Resolution No. 2017-267 at 1.

538. Laguna Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Laguna Tribal Council Resolution No. 45-17 at 3 (dated July 8, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 207 (resolving that Laguna Pueblo "support[s] the Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 2 ("[A]t all times the lands aboriginally used by the Pueblo of Laguna within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated."); id. at 2 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to

those land"); id. at 3 ("[T]hrough this resolution, that the Court can provide complete relief in the Jemez Lawsuit among existing parties without the participation of the Pueblo of Laguna.").

539. Twenty Laguna Pueblo Tribal Council members voted for Resolution No. 45-17. See Pueblo of Laguna Tribal Council Resolution No. 45-17 at 3.

540. Ohkay Owingeh Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Ohkay Owingeh Tribal Council Resolution No. 2018-06 at 3 (dated Feb. 7, 2018), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 208 (resolving that Ohkay Owingeh Pueblo "support[s] the Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land within the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those land"); id. at 2 ("[T]hrough this resolution, . . . the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Ohkay Owingeh.").

541. Eleven Ohkay Owingeh Tribal Council members voted for Ohkay Owingeh Resolution 2018-06. See Pueblo of Ohkay Owingeh Tribal Council Resolution No. 2018-06 at 2-3.

542. Picuris Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Picuris Tribal Council Resolution No. 2017-15 at 2 (dated July 21, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 209 (resolving that Picuris Pueblo "support[s] the Jemez'

efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land within the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. at 2 ("[T]hrough this resolution, the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Picuris.").

543. Eight Picuris Pueblo Tribal Council members voted for Picuris Resolution 2017-15, which zero opposed and zero abstained. See Pueblo of Picuris Tribal Council Resolution No. 2017-15 at 3.

544. San Felipe Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of San Felipe Tribal Council Resolution No. SFP 2017-133 at 3 (dated Aug. 23, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 210 (resolving that San Felipe Pueblo "support[s] the Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez' continuing aboriginal Indian title to those lands"); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land now within the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the

present."); id. at 2 ("[A]t all times the lands aboriginally used by the Pueblo of San Felipe within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated."); id. at 2 ("[T]hrough this resolution, that the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of San Felipe.").

545. The San Felipe Tribal Council voted for and approved San Felipe Resolution SFP 2017-113. See Pueblo of San Felipe Tribal Council Resolution No. SFP 2017-133 at 3.

546. San Ildefonso Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of San Ildefonso Tribal Council Resolution No. SI-R17-021 at 7 (dated July 7, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 211 (resolving that San Ildefonso Pueblo "supports the Pueblo of Jemez's efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 5 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. at 5 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. ("[A]t all times the lands aboriginally used by the Pueblo de San Ildefonso within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated."); id. at 7 ("[T]he court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo de San Ildefonso.").

547. Six San Ildefonso Pueblo Tribal Council members voted for San Ildefonso Resolution SI-R17-021, with zero opposed and zero abstentions, although four council members were absent. See Pueblo of San Ildefonso Tribal Council Resolution No. SI-R17-021 at 2 (dated July 7, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 211.

548. Santa Ana Pueblo supports Jemez Pueblo's efforts to reclaim any Valles Caldera lands to which it can prove it has aboriginal title.[174] See, e.g., Pueblo of Santa Ana Support Letter from Governor Glenn Tenorio at 1 (dated April 16, 2018), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 212 ("Santa Ana has always supported other tribes in their claims to recover lands to which those tribes can show unextinguished aboriginal title, and the same is true of the claims of the Pueblo of Jemez in this case."); id. ("[W]e fully support the return to Jemez of any lands within the Caldera that Jemez can show it exclusively used and occupied over a long period of time."); id. (wishing Jemez Pueblo "well in its pursuit of its claims to its aboriginal lands").

549. Santo Domingo Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Santo Domingo Tribal Council Resolution No. 10-2017-24 at 2 (dated Oct. 11, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 213 (resolving that Santo Domingo Pueblo "support[s] the Pueblo of Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United

[174]Santa Ana Pueblo Governor Glenn Tenorio did not submit Jemez Pueblo's request for support to the Santa Ana Pueblo Tribal Council. See Pueblo of Santa Ana Support Letter from Governor Glenn Tenorio at 1 (dated April 16, 2018), admitted October 29, 2018, at trial as Jemez Pueblo's Ex. PX 212.

States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land now within the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. ("[A]t all times the lands aboriginally used by the Pueblo of Santo Domingo within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated."); id. at 3 ("[T]he Pueblo of Santo Domingo and the Pueblo of Jemez have reached an agreement as tribal sovereigns regarding their respective traditional cultural activities and spiritual uses and, in particular, on arrangements as regards the traditional cultural activity and spiritual uses of the Pueblo of Santo Domingo within the Valles Caldera."[175]); id. at 2 ("[T]hrough this resolution, that the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Santo Domingo.").

550. Twenty-seven Santo Domingo Pueblo Tribal Council members voted for Santo Domingo Resolution 10-2017-24, which zero opposed and zero abstained. See Pueblo of Santo Domingo Tribal Council Resolution No. 10-2017-24 at 3.

[175]Anschuetz testified that such negotiations regarding other Pueblos' "respective traditional cultural activities and spiritual uses and, in particular, on arrangements as regards the traditional cultural activity and spiritual uses" establishes that those Pueblos actually used and continue to use the Valles Caldera. Dec. 3 Tr. at 5050:14-5051:8 (Marinelli, Anschuetz)("It's telling me that [Santo Domingo Pueblo has] traditional cultural activities and spiritual uses within the Valles Caldera, but they are still -- they've reached an agreement with the Pueblo of Jemez.").

551. Taos Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Taos Tribal Council Resolution No. 2017-28 at 2 (dated July 27, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 214 (resolving that Taos Pueblo "support[s] the Pueblo of Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 ("[T]o Taos Pueblo's knowledge, the Pueblo of Jemez has occupied and continuously used its aboriginal lands in the Jemez Mountains for traditional and non-traditional purposes from time immemorial to the present, including the area now encompassed by the VCNP."); id. (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. at 2 ("[T]hrough this resolution, that the court in the Jemez Pueblo Lawsuit can accord complete relief among existing parties without the participation of Taos Pueblo."); Designation of Deposition Testimony -- Gilbert Suazo[176] at 7:18-8:2 (dated Oct. 9, 2018), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 559.

[176]The Taos Pueblo Tribal Council authorized Taos Pueblo Governor Gilbert Suazo, Sr. to testify on behalf of Taos Pueblo in support of Jemez Pueblo's Valles Caldera claim. See Designation of Deposition Testimony -- Gilbert Suazo at 4:12-22 (Suazo)(dated Oct. 9, 2018), admitted November 15, 2018, at trial as Jemez Pueblo's Ex. PX 559 ("Suazo Depo. Dsgn."). Suazo testified that Taos Pueblo has a place name for the Jemez Mountains range, and that the Jemez Mountains are culturally significant to Taos Pueblo. See, e.g., Suazo Depo. Dsgn. at 6:10-13 (Suazo)(stating that the Jemez Mountains are part of Taos Pueblo's cultural landscape); id. at 8:7-8 (Suazo), id. at 21:22–22:4 (Suazo), id. at 24:9-23 (Suazo)(stating that the Jemez Mountain range has "cultural significance to Taos Pueblo"). Taos Pueblo bases its support for Jemez Pueblo on Jemez Pueblo's reputation and representations regarding Jemez Pueblo's Valles Caldera use. See Suazo Depo. Dsgn. at 7:18-8:2 (Suazo); id. at 9:25-10:12 (Suazo)(asserting that Taos Pueblo's belief regarding Jemez Pueblo's Valles Caldera use "is based on our trust and confidence in the Jemez People's knowledge about their aboriginal homelands and areas of use for traditional and nontraditional purposes"). Suazo's knowledge of Taos Pueblo's culture and history is limited to

552. Twenty-nine Taos Pueblo Tribal Council members voted for Taos Resolution 2017-28, which zero opposed and zero abstained. See Pueblo of Taos Tribal Council Resolution No. 2017-28 at 3.

553. Tesuque Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Tesuque Tribal Council Resolution No. 35-0910-2018 at 2 (dated Sept. 10, 2018), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 215 (resolving that Tesuque Pueblo "support[s] the Pueblo of Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land within the VCNP, for traditional and non-traditional

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his firsthand experience, and he is not aware whether Taos Pueblo members presently use or have ever used the Valles Caldera. See Suazo Depo. Dsgn. at 6-18:7-2 (Suazo); id. at 26:7-24 (Suazo); id. at 5:5-19 (Suazo), id. at 26:17-18 (Suazo)("Any spiritual uses of land is culturally sensitive information that I cannot talk about."); id. at 28:7-8 (stating that Suazo is not aware whether Taos Pueblo members gathered piki stones from Valles Caldera); id. at 29:5-18 (stating that Suazo is aware that obsidian was a valuable resource to Taos Pueblo, but is not aware whether, when, or from what areas Taos Pueblo members gathered obsidian from the Valles Caldera); id. at 41:16-22 (Suazo)(stating that Suazo is not aware whether Taos Pueblo members historically practiced traditional cultural activities in the Valles Caldera). Moreover, in preparation for his deposition, Suazo spoke to Jemez Pueblo's attorney and to Taos Pueblo's attorney, but he did not speak to the Taos Pueblo Tribal Council. See Suazo Depo. Dsgn. at 23:3-7 (Suazo). Additionally, Suazo does not know about any other Pueblo's or Tribe's history and culture, including whether such culture involves the Valles Caldera. See, e.g., Suazo Depo. Dsgn. at 22:5-7 (Suazo), id. at 27:17-24 (Suazo); id. at 41:11-15 (Suazo)("We do not know about each other's traditional cultural activities and spiritual uses, because that is sensitive information for each pueblo's own use."), id. at 47:4-24 (Suazo)(affirming that Suazo has no personal knowledge of Santa Clara Pueblo members' or Zia Pueblo members' Valles Caldera uses).

purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. at 2 ("[T]hrough this resolution, the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Tesuque.").

554. Nine Tesuque Pueblo Tribal Council members voted for Tesuque Resolution 35-0910-2018, which zero opposed and zero abstained. See Pueblo of Tesuque Tribal Council Resolution No. 35-0910-2018 at 3.

555. Zuni Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Pueblo of Zuni Tribal Council Resolution No. M70-2017-P103 at 2 (dated Oct. 23, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 216 (resolving that Zuni Pueblo "support[s] the Pueblo of Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including land within the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. at 2 ("[T]hrough this resolution, the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Zuni.").

556. Five Zuni Pueblo Tribal Council members voted for Zuni Resolution M70-2017-P103, with zero opposed and zero abstentions. See Pueblo of Zuni Tribal Council Resolution No. M70-2017-P103 at 3 (dated Oct. 23, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 216.

557. Ysleta del Sur Pueblo supports Jemez Pueblo's Valles Caldera claim. See, e.g., Ysleta del Sur Pueblo Tribal Council Resolution No. TC-016-017 at 2 (dated May 18, 2016), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 217 (resolving that Ysleta del Sur Pueblo "support[s] the Pueblo of Jemez' efforts to secure judicial recognition of its aboriginal title to the Valles Caldera lands"); id. at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. at 2 ("[T]hrough this resolution, that the court in the Jemez Lawsuit can accord complete relief among existing parties without the participation of the Pueblo of Ysleta del Sur.").

558. Eight Ysleta del Sur Tribal Council members voted for Ysleta del Sur Resolution TC-016-017, which zero opposed and zero abstained. See Ysleta del Sur Pueblo Tribal Council Resolution No. TC-016-017 at 2.

559. The All Indian Pueblo Council supports Jemez Pueblo's Valles Caldera claim. See, e.g., All Indian Pueblo Council Resolution No. 2012-14 at 2 (dated Dec. 3, 3012), admitted November 7, 2018, at trial as Jemez Pueblo's Ex. PX 218 ("[T]he All Indian Pueblo Council calls upon the United States as Indian trustee to recognize the Pueblo of Jemez' continuing aboriginal Indian title to the lands encompassed by the VCNP and to return ownership and control of these lands to the Pueblo of Jemez."); id. at 1 ("[T]he Pueblo of Jemez has continuously used and

occupied lands encompassed by the VCNP for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. ("[A]t all times the lands encompassed by the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated, and the Pueblo of Jemez wants these lands returned to its ownership and control.").

560. Fourteen All Indian Pueblo Council members voted for the All Indian Pueblo Council Resolution 2012-14, which zero opposed and zero abstained, although six council members were absent. See All Indian Pueblo Council Resolution No. 2012-14 at 2.

561. The All Pueblo Council of Governors supports Jemez Pueblo's Valles Caldera claim, provided that the United States ensures that other Tribes have access to the Valles Caldera and that Jemez Pueblo respects Santa Clara Pueblo's Valle Caldera easement. See, e.g., All Pueblo Council of Governors Resolution No. APCG 2014-11 at 2 (dated Aug. 20, 2014), admitted November 7, 2018, at trial as Jemez Pueblo's Ex. PX 219 ("[T]he All Pueblo Council of Governors calls upon the United States . . . to return ownership and control of [the Valles Caldera] to the Pueblo of Jemez but also to ensure that other Pueblos will continue to have access to . . . the Valles Caldera . . . , and to maintain the existing [Santa Clara Pueblo] [e]asement."); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. ("[A]t all times the lands aboriginally used by the Pueblo of Jemez within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been

abandoned or terminated."); id. ("[T]he Pueblo of Jemez wants these lands returned to its control.").

562. Fifteen All Pueblo Council of Governors Resolution Council members voted for All Pueblo Council of Governors Resolution APCG 2014-11, with zero opposed and zero abstentions. See All Pueblo Council of Governors Resolution No. APCG 2014-11 at 2.

563. The NCAI supports Jemez Pueblo's Valles Caldera claim.[177] See, e.g., NCAI Resolution No. ATL-14-009 at 2 (dated Oct. 2014), admitted November 7, 2018, at trial as Jemez Pueblo's Ex. PX 220 ("[T]he NCAI calls upon the United States . . . to return ownership and control of [the Valles Caldera] to the Pueblo of Jemez but also to ensure that other Pueblos will continue to have access to . . . the Valles Caldera . . . , and to maintain the existing [Santa Clara Pueblo] [e]asement."); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time

[177]The NCAI's 2014 resolution conflicts with NCAI's 1997 resolution stating that Santa Clara Pueblo has aboriginal title to some of the same lands at issue in this case. Compare NCAI Resolution No. ATL-14-009 at 2 (dated Oct. 2014), admitted November 7, 2018, at trial as Jemez Pueblo's Ex. PX 220, with Santa Clara Restoration Assessment at 54-55 (including facsimile of NCAI Resolution # SFE-97-103, which resolves that "NCAI does hereby fully support the restoration of a minimum of the 9,100-acre area in the northeast corner of the 'Baca Location #1' to Santa Clara Pueblo, to be held in trust by the Federal Government"). Moreover, Jemez Pueblo did not inform the NCAI that Zia Pueblo opposes Jemez Pueblo's position, or that Santa Clara Pueblo and San Ildefonso Pueblo have concerns regarding Jemez Pueblo's efforts to obtain the Valles Caldera. See, e.g., Nov. 9 Tr. at 2629:4-23 (Marinelli, Madalena)(affirming that Madalena did not inform NCAI that Zia opposes and that Santa Clara Pueblo and San Ildefonso Pueblo have concerns regarding Jemez Pueblo's efforts to obtain the Valles Caldera); Letter from Governor Madalena to NCAI at 1 (dated Oct. 3, 2014), admitted November 9, 2018, at trial as United States' Ex. DX-UU (omitting reference to Pueblos' concerns regarding Jemez Pueblo's efforts to obtain the Valles Caldera).

immemorial to the present."); id. ("[A]t all times the lands encompassed by the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated, and the Pueblo of Jemez wants these lands returned to its ownership and control.").

564. The NCAI General Assembly adopted the National Congress of American Indians Resolution ATL-14-009. See National Congress of American Indians Resolution No. ATL-14-009 at 2.

565. The Southern Pueblos Council supports Jemez Pueblo's Valles Caldera claim. See, e.g., Southern Pueblos Council Resolution No. 2014-03 at 2 (dated Aug. 14, 2014), admitted November 7, 2018, at trial as Jemez Pueblo's Ex. PX 221 ("[T]he 10 Southern Pueblos Council calls upon the United States . . . to return ownership and control of these lands to the Pueblo of Jemez in a way that ensures permissive access by nearby Pueblos to the Valles Caldera and maintains the existing Conservation Easement held by Santa Clara Pueblo."); id. at 1 ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. ("[A]t all times the lands encompassed by the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated."); id. at 2 ("[T]he Pueblo of Jemez wants these lands returned to its control.").

566. Seven Southern Pueblo Council members voted for the Southern Pueblos Council Resolution 2014-03, which zero opposed and zero abstained. See Southern Pueblos Council Resolution No. 2014-03 at 2.

567. The Jemez Pueblo Tribal Council passed a resolution which states that, should Jemez Pueblo acquire the Valles Caldera, Jemez Pueblo will "continue to allow other Pueblos access to engage in their traditional cultural activities and spiritual uses that they have traditionally conducted within the Valles Caldera and will also preserve the Conservation and Access Easement held by Santa Clara Pueblo within the Valles Caldera Preserve." Jemez Tribal Council Resolution No. 2016-50, Confirming the Pueblo of Jemez's Commitment to Continue to Allow Traditional Uses by Other Pueblos on the Jemez Pueblo's Aboriginal Land in the Valles Caldera at 2 (dated Aug. 30, 2016), admitted November 20, 2018, at trial as Jemez Pueblo's Ex. 222. See, e.g., Nov. 6 Tr. at 1885:14-20 (Keegan, Ferguson)(affirming Ferguson's familiarity with Jemez Pueblo's resolution permitting other Tribes to use the Valles Caldera[178]); Jemez Tribal Council Resolution

[178]Ferguson understands that Jemez Pueblo [redacted] Nov. 6 Tr. at 1923:17-1924:22 (Ferguson); [redacted] Peak, see, e.g., Plaintiff Pueblo of Jemez's First Supplemental Objections and Answers to Defendant United States' First Set of Interrogatories at 7 [redacted]; Excerpts from Joseph Toya Deposition at 116:20-117:10 [redacted] id. at 189:17-191:19 (Toya) [redacted] Nov. 9 Tr. at 2638:12-2639:15 (Madalena) [redacted] Nov. 19 Tr. at 4246:7-25 (Yepa) [redacted] id. at 4272:10-4273:23 (Yepa) [redacted] see, e.g., Nov. 6 Tr. at 1943:24-1944:2 (Marinelli, Ferguson); id. at 1945:17-1950:21 (Marinelli, Ferguson [redacted] id. at 1952:20-1954:5 (Marinelli, Ferguson [redacted] Nov. 5 Tr. at 1564:3-12 (Chinana [redacted]

No. 2016-50, Confirming the Pueblo of Jemez's Commitment to Continue to Allow Traditional Uses by Other Pueblos on the Jemez Pueblo's Aboriginal Land in the Valles Caldera at 1 (acknowledging that Jemez Pueblo is asking "the United States District Court to declare that the Pueblo of Jemez has the exclusive right to use, occupy and possess certain lands in the Valles Caldera based on the Pueblo of Jemez's continuing aboriginal Indian title to those lands"); id. ("[T]he Pueblo of Jemez has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the VCNP, for traditional and non-traditional purposes pursuant to the Pueblo's aboriginal Indian title from time immemorial to the present."); id. at 2 ("[A]t all times the lands aboriginally used by the Pueblo of Jemez within the VCNP have remained subject to the valid aboriginal Indian title of the Pueblo of Jemez, which title has never been abandoned or terminated.").

568. Jemez Tribal Council Resolution No. 2016-50 does not identify the specific cultural activity or spiritual use that Jemez Pueblo would permit, does not identify how Jemez Pueblo would determine whether to permit a specific access request, and does not prevent Jemez Pueblo from repealing the resolution's access provision. See, e.g., Nov. 6 Tr. at 1952:20-1954:5 (Marinelli, Ferguson)(affirming that Jemez Pueblo "could pass a resolution in 2019 saying that no tribes are allowed into the Valles Caldera Preserve"); Jemez Tribal Council Resolution No. 2016-50, Confirming the Pueblo of Jemez's Commitment to Continue to Allow Traditional Uses by Other Pueblos on the Jemez Pueblo's Aboriginal Land in the Valles Caldera at 1-3 (dated Aug. 30, 2016), admitted November 20, 2018, at trial as Jemez Pueblo's Ex. PX 222.

569. One of Jemez Pueblo's retained law firms, Van Amberg, Rogers, Yepa, Abeita & Gomez, LLP, represents or has represented several Pueblos that recently passed resolutions in

support of Jemez Pueblo's Valles Caldera claim, including the Pueblos of Cochiti, Isleta, Nambe, San Ildefonso, San Felipe, Taos, and a Laguna entity. See, e.g., Nov. 9 Tr. at 2758:4-14 (Marinelli, Suina)(affirming that Mr. Yepa's law firm represents Cochiti Pueblo); Nov. 19 Tr. at 4266:14-4267:12 (Marinelli, Yepa)(asserting that Mr. Yepa has represented Jemez Pueblo as general counsel since 1989, and that Mr. Yepa also represents the Pueblos of Cochiti, Isleta, Nambe, San Ildefonso, San Felipe, Taos, and a Laguna entity); Nov. 20 Tr. at 4296:16-4298:15 (Marinelli, Yepa)(affirming that Mr. Yepa's law firm has represented Jemez Pueblo since 1998, including when Mr. Yepa was a Valles Caldera trustee).

570. Most of the Pueblos' resolutions do not adopt Jemez Pueblo's proposed language that Jemez Pueblo has aboriginal title to the entire Valles Caldera, and instead adopt language which states that Jemez Pueblo has occupied only unidentified "land within" the Valles Caldera. E.g., Nov. 6 Tr. at 1980:24-1983:18 (Marinelli, Ferguson)(affirming that Ferguson, as an anthropologist, cannot determine whether the phrase "including land within the Valles Caldera National Preserve" refers to the entire Valles Caldera or merely "some of the land within the Preserve"); Pueblo of Acoma Tribal Council Resolution 2017-19[179] at 1 (dated June 16, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 204 (stating only that Jemez Pueblo

[179]Jemez Pueblo asks the Court to find that "[t]he Pueblo of Acoma Tribal Council, as the legislative body for the Pueblo of Acoma issued Resolution No. 2017-019 on June 16, 2017, to support the Pueblo of Jemez in this litigation." Jemez Pueblo's Proposed Findings ¶ 567, at 169 (citing Pueblo of Acoma Tribal Council Resolution No. 2017-019 (dated June 16, 2017), admitted October 31, 2018, at trial as Jemez Pueblo's Ex. PX 204). The cited evidence, however, is at best neutral to Jemez Pueblo's Valles Caldera claim, and therefore does not support the proposed fact. See Pueblo of Acoma Tribal Council Resolution No. 2017-019 at 1 ("The Pueblo of Jemez *alleges* that it has continuously used and occupied its aboriginal lands in the Jemez Mountains, including the area now encompassed by the Valles Caldera National Preserve . . . ." (emphasis added)). The Court, therefore, will not adopt the proposed fact.

"*alleges* that it has continuously used and occupied is aboriginal lands in the Jemez Mountains" (emphasis added)); Pueblo of Isleta Tribal Council Resolution 2017-267 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land within the [Valles Caldera]"); Pueblo of Laguna Tribal Council Resolution 45-17 at 2 ("[T]he lands aboriginally used by the Pueblo of Laguna within the [Valles Caldera] have remained subject to" Jemez Pueblo's aboriginal title); Ohkay Owingeh Tribal Council Resolution 2018-6 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land within the [Valles Caldera]"); Pueblo of Picuris Tribal Council Resolution 2017-15 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land within the [Valles Caldera]"); Pueblo of San Felipe Tribal Council Resolution 2017-133 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land now within the [Valles Caldera]"); Pueblo of Santo Domingo Tribal Council Resolution 10-2017-24 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land now within the [Valles Caldera]"); Pueblo of Tesuque Tribal Council Resolution 35-0910-2018 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land within the [Valles Caldera]"); Pueblo of Zuni Tribal Council Resolution M70-2017-P103 at 1 (stating that, since time immemorial, Jemez Pueblo has used and occupied its aboriginal lands, "including land within the [Valles Caldera]").

571. Jemez Pueblo acknowledges that most New Mexico Pueblos and Tribes have traditional and spiritual associations with, and uses of, the Valles Caldera.[180] See, e.g., Oct 31 Tr. at 731:9-732:16 (B. Shendo); id. at 814:11-816:6 (B. Shendo)(confirming Jemez Pueblo's commitment "to allow pueblos to continue the traditional cultural and spiritual activities which they've previously conducted within the Valles Caldera"); All Pueblo Council of Governors Meeting Minutes at 3 ("[Jemez Pueblo Governor Joshua Madelena] stated that the Pueblo of Jemez

[180]The United States asks the Court to find that Jemez Pueblo "secured support from certain other Pueblos by misrepresenting whether it would continue to allow them to continue their traditional use of the Caldera." United States' Proposed Findings ¶ 503, at 145 (citing Oct 31 Tr. at 731:9732:16 (B. Shendo); id. at 814:11-816:6 (B. Shendo); All Pueblo Council of Governors Meeting Minutes at 3; Letter from Jemez Pueblo Governor Joseph Toya to Acoma Pueblo Governor Kurt Riley at 1 (dated May 15, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-QT ; Letter from Jemez Pueblo Governor Joseph Toya to Ysleta del Sur Governor Carlos Hisa at 1 (dated May 15, 2017), admitted November 20, 2018, at trial as United States' Ex. DX-VC; Letter from Jemez Governor Joseph A. Toya to Cochiti Governor Eugene Herrera (dated Feb. 17, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-QM). The cited support for this proposed fact, however, confirms merely Jemez Pueblo's express commitment to respect other Pueblos' traditional Valles Caldera use; it does not suggest that Jemez Pueblo's representations are disingenuous or that other Pueblos required such representations to lend their support to Jemez Pueblo's cause. See, e.g., Oct 31 Tr. at 814:11-816:6 (B. Shendo)(confirming Jemez Pueblo's commitment "to allow pueblos to continue the traditional cultural and spiritual activities which they've previously conducted within the Valles Caldera"); All Pueblo Council of Governors Meeting Minutes at 3 ("[Jemez Pueblo Governor Joshua Madelena] stated that the Pueblo of Jemez agrees that other Pueblos may continue any traditional cultural activities and spiritual uses they have traditionally conducted with the Valles Caldera."); Letter from Jemez Pueblo Governor Joseph Toya to Acoma Pueblo Governor Kurt Riley at 1 ("[T]he Jemez Tribal Council adopted a resolution confirming its commitment to allow the Pueblo of Acoma and other Pueblos to continue traditional uses of the Valles Caldera once the Pueblo of Jemez recovers these lands."); Letter from Jemez Pueblo Governor Joseph Toya to Ysleta del Sur Governor Carlos Hisa at 1 ("[T]he Jemez Tribal Council adopted a resolution confirming its commitment to allow the Pueblo of Ysleta del Sur and other Pueblos to continue traditional uses of the Valles Caldera once the Pueblo of Jemez recovers these lands."); Letter from Jemez Pueblo Governor Joseph Toya to Cochiti Governor Eugene Herrera at 1 ("[Former Cochiti Pueblo] Governor [Nicholas] Garcia . . . asked that the Jemez tribal council confirm the right of the Pueblo de Cochiti to continue traditional uses of the Valles Caldera once the Pueblo of Jemez recovers these lands. The Jemez tribal council agreed to that request."). The Court, therefore, will not adopt the proposed fact.

agrees that other Pueblos may continue any traditional cultural activities and spiritual uses they have traditionally conducted with the Valles Caldera."); Letter from Jemez Pueblo Governor Joseph Toya to Acoma Pueblo Governor Kurt Riley at 1 (dated May 15, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-QT ("[T]he Jemez Tribal Council adopted a resolution confirming its commitment to allow the Pueblo of Acoma and other Pueblos to continue traditional uses of the Valles Caldera once the Pueblo of Jemez recovers these lands."); Letter from Jemez Pueblo Governor Joseph Toya to Ysleta del Sur Governor Carlos Hisa at 1 (dated May 15, 2017), admitted November 20, 2018, at trial as United States' Ex. DX-VC ("[T]he Jemez Tribal Council adopted a resolution confirming its commitment to allow the Pueblo of Ysleta del Sur and other Pueblos to continue traditional uses of the Valles Caldera once the Pueblo of Jemez recovers these lands."); Letter from Jemez Governor Joseph Toya to Cochiti Governor Eugene Herrera (dated Feb. 17, 2017), admitted October 29, 2018, at trial as United States' Ex. DX-QM ("[Former Cochiti Pueblo] Governor [Nicholas] García . . . asked that the Jemez tribal council confirm the right of the Pueblo de Cochiti to continue traditional uses of the Valles Caldera once the Pueblo of Jemez recovers these lands. The Jemez tribal council agreed to that request.").

CONCLUSIONS OF LAW

1. The Court will now state its conclusions of law. The Court will begin by summarizing the case's relevant procedural history. It will then set out the law regarding issues relevant to its analysis. The Court will then present that analysis.

PROCEDURAL BACKGROUND

2. The case's procedural history includes Jemez Pueblo's Complaint to Quiet Title to Aboriginal Indian Land, filed July 20, 2012 (Doc. 1)("Complaint"); the Memorandum Opinion

and Order of the Honorable Robert C. Brack, now-senior United States District Judge for the District of New Mexico, granting the United States' motion to dismiss, see Pueblo of Jemez v. United States, No. CIV 12-0800 RB/RHS, 2013 WL 11325229, at *5 (D.N.M. Sept. 24, 2013)(Brack, J.)("Pueblo of Jemez I"), rev'd and remanded, 790 F.3d 1143 (10th Cir. 2015); the United States Court of Appeals for the Tenth Circuit's order reversing Judge Brack's judgment and remanding the case to district court, Pueblo of Jemez v. United States, 790 F.3d 1143, 1165 (10th Cir. 2015); the Court's Oct. 25 MOO regarding evidence of Valles Caldera use by other than Jemez Pueblo after 1848, see Pueblo of Jemez v. United States, Oct. 25 MOO, 350 F. Supp. 3d 1052; the Court's Memorandum Opinion and Order regarding hearsay contained in America Indian oral tradition evidence testimony, see Memorandum Opinion and Order, filed November 15, 2018 (Doc. 326), 366 F. Supp. 3d 1234 (Browning, J)("Nov. 15 MOO"); the Court's Order regarding the parties' proposed site visit to the Valles Caldera, see Order, filed March 12, 2019 (Doc. 372)("Court View Order); the Court's Order regarding matters related to expert witness evidence; see Order, filed March 12, 2019 (Doc. 373)("Expert Witness Order"); the Court's Order on summary judgment, see Order, filed March 12, 2019 (Doc. 374), Pueblo of Jemez v. United States, No. CIV 12-0800 JB\JHR, 2019 WL 1128359, at *1 (D.N.M. March 12, 2019)(Browning, J)("SJ Order"); and the Court's Order on partial summary judgment, see Order, filed March 12, 2019 (Doc. 375), Pueblo of Jemez v. United States, No. CIV 12-0800 JB\JHR, 2019 WL 1139724, at *1 (D.N.M. Mar. 12, 2019)(Browning, J.)("Partial SJ Order"). It also includes a bench trial; oral closing arguments, see Clerk's Minutes, filed March 7, 2019 (Doc. 392); and proposed FOFs and COLs.

1. The Complaint.

3. On July 20, 2012, Jemez Pueblo filed its Complaint. See Complaint at 1. Jemez Pueblo asserts that the United States' claim of title to the Valles Caldera "is subject to Jemez Pueblo's aboriginal Indian title right of possession, use and occupancy that has existed since prehistoric times." Specifically, Jemez Pueblo alleges aboriginal title to "that certain parcel of land commonly known as Baca Location No. 1 located in Sandoval and Rio Arriba Counties, New Mexico . . . containing 99,289.39 acres, more or less." Complaint at 27.

4. In the Complaint, Jemez Pueblo asserts three distinct claims for relief under the federal common law and the Quiet Title Act, 28 U.S.C. § 2409a ("QTA"). First, Jemez Pueblo asks the Court to "[e]nter a judgment pursuant to 28 U.S.C. § 2409a that Plaintiff has the exclusive right to use, occupy and possess the lands of the Valles Caldera National Preserve pursuant to its continuing aboriginal Indian title to such lands." Complaint, Prayer for Relief, ¶ 1, at 14-15.

5. Second, Jemez Pueblo asks the Court to "[e]nter a judgment pursuant to 28 U.S.C. § 2409a quieting the aboriginal Indian title to the lands of the Valles Caldera National Preserve in Plaintiff." Complaint, Prayer for Relief, ¶ 2, at 15.

6. Third, Jemez Pueblo asks the Court to "[a]ward Jemez Pueblo its attorneys' fees, costs and expenses for this action." Complaint, Prayer for Relief, ¶ 3, at 15.

2. Judge Brack's Decision.

7. On September 24, 2013, Judge Brack granted the United States' motion to dismiss for lack of subject-matter jurisdiction by relying primarily on the Tenth Circuit's opinion in Navajo Tribe of Indians v. New Mexico, 809 F.2d 1455, 1463 (10th Cir. 1987), which held that the statute of limitations within the ICCA bars suits against the United States for aboriginal title claims. See

Pueblo of Jemez I, 2013 WL 11325229, at *5 (citing Navajo Tribe of Indians v. New Mexico, 809 F.2d at 1463).

8. Specifically, Judge Brack holds that Jemez Pueblo had a claim against the United States that accrued as a matter of law before 1946 and, therefore, that Jemez Pueblo's sole remedy is to have brought an action before the ICC before the statute of limitations bars the claim. See Pueblo of Jemez I, 2013 WL 11325229, at *4 ("It is well-established that the ICCA provided the exclusive remedy for pre-1946 Indian tribal land claims against the United States. . . . In other words, if a Tribe failed to bring a timely claim under the ICCA, it lost its opportunity to litigate its dispute with the United States.").

9. Judge Brack further concludes that Jemez Pueblo did not distinguish its claim from contrary precedent and instead "relie[d] on inapplicable cases involving claims for aboriginal title against parties other than [the United States]." Pueblo of Jemez I, 2013 WL 11325229, at *4.

10. Regarding the Tenth's Circuit opinion in Navajo Tribe of Indians v. New Mexico, Judge Brack stated that he is "not free to speculate" about how broadly the Tenth Circuit interprets the word "claim," and instead is tasked with ascertaining and applying the Tenth Circuit's holding that the Tribe's claim against the United States is barred, because the claim falls within the ICCA's exclusive jurisdiction and is therefore subject to the ICCA's statute of limitations. Pueblo of Jemez I, 2013 WL 11325229, at *4. Judge Brack concluded that Navajo Tribe of Indians v. New Mexico is controlling precedent, and that Jemez Pueblo's inconsistent suggestions that it does not control and that the Tenth Circuit wrongly decided it are "both unpersuasive and unavailing." Pueblo of Jemez I, 2013 WL 11325229, at *4. Moreover, Judge Brack found that Navajo Tribe of

Indians v. New Mexico is "concordant" with out-of-circuit precedent. Pueblo of Jemez I, 2013 WL 11325229, at *4.

11. Judge Brack took issue with the fact that Jemez Pueblo asserts both that the Baca heirs received their 1860 land grant subject to Jemez Pueblo's aboriginal title and also that Jemez Pueblo did not have a claim against the United States in 1946:

> Plaintiff cannot have it both ways. Either Defendant's grant to the Baca family extinguished aboriginal title or not. If the Baca land grant extinguished Plaintiff's aboriginal title, then aboriginal title was extinguished in 1860 and Plaintiff cannot claim aboriginal title now. On the other hand, if the Baca land grant did not extinguish Plaintiff's aboriginal title, Plaintiff's claim existed prior to 1946 and Plaintiff had the opportunity to avail itself of the remedy afforded by the ICCA and such claim is now barred by the statute of limitations contained in the ICCA.

Pueblo of Jemez I, 2013 WL 11325229, at *4.

12. Judge Brack also concludes that ICCA § 22 required Jemez Pueblo to litigate its claim to the Valles Caldera in its prior ICC proceedings when it sought compensation, and received money damages, for the taking and extinguishment of aboriginal title to other Jemez Pueblo lands. See Pueblo of Jemez I, 2013 WL 11325229, at *5. Judge Brack therefore concludes further that, "[b]ecause [Jemez Pueblo] did not comply with the requirements of the ICCA with respect to the subject property, its claim against the United States is barred by sovereign immunity." Pueblo of Jemez I, 2013 WL 11325229, at *5. Moreover, Judge Brack states that the United States' relatively recent acquisition of the Valles Caldera has no effect on his analysis given that "[c]ourts have uniformly held that a tribe cannot obtain review of a historical land claim otherwise barred by the ICCA by challenging present-day actions involving the land." Pueblo of Jemez I, 2013 WL 11325229, at *5.

3. The Tenth Circuit's Opinion.

13. On June 26, 2015, the Tenth Circuit issued an opinion which concludes that Judge Brack erred in dismissing Jemez Pueblo's Valles Caldera claim. See Pueblo of Jemez v. United States, 790 F.3d at 1147. In doing so, the Tenth Circuit reiterates that, absent clear-and-unequivocal Congressional intent to extinguish pre-existing aboriginal rights, Jemez Pueblo's aboriginal right of occupancy survives the grant to the Baca heirs. See 790 F.3d at 1162-63. The Tenth Circuit further holds that the Baca heirs' occupation of the Valles Caldera, standing alone, may not be sufficient to extinguish aboriginal title, because fee title and aboriginal title can exist simultaneously. See 790 F.3d at 1165. Hence, the Tenth Circuit remands the case to Judge Brack for consideration whether Jemez Pueblo "had, and still has, aboriginal title to the land at issue in this case." 790 F.3d at 1165.

14. After providing a detailed history of aboriginal rights, the Tenth Circuit first turns to the question of subject-matter jurisdiction. See 790 F.3d at 1161. In describing its analysis whether Judge Brack has subject-matter jurisdiction, the Tenth Circuit notes that if Jemez Pueblo

> had a claim against the United States which, as a matter of law, accrued before August 13, 1946 . . . then the district court was correct in holding the claim barred by ICCA § 12 and concluding that it lacked subject matter jurisdiction. If we cannot determine as a matter of law that there was a pre–1946 claim against the government, then the claim is not facially barred by § 12 of the ICCA.

Pueblo of Jemez v. United States, 790 F.3d at 1161. Regardless the Tenth Circuit's claim-accrual analysis, the Tenth Circuit also tasked itself, in accordance with the United States' rule 12(b)(1) argument, to "determine alternatively whether compensation paid to the Jemez Pueblo in prior litigation before the ICC forecloses this claim under the ICCA § 22." Pueblo of Jemez v. United States, 790 F.3d at 1161. The Tenth Circuit then rejects the United States' position that the 1860

land grant and the Surveyor General's assessment that the lands were vacant extinguished Jemez Pueblo's aboriginal title, concluding that "[t]he government's arguments ignore the nature of aboriginal title and the last 200 years of Supreme Court jurisprudence."[181] Pueblo of Jemez v. United States, 790 F.3d at 1162. The Tenth Circuit cites numerous Supreme Court and Courts of Appeals decisions which hold that federal land grants pass fee title to grantees subject to aboriginal title. See Pueblo of Jemez v. United States, 790 F.3d at 1162. For example, the Tenth Circuit quotes extensively from Oneida Indian Nation of New York State v. Oneida County, New York, wherein the Supreme Court held that "Indian title . . . could be terminated only by sovereign act." Pueblo of Jemez v. United States, 790 F.3d at 1162 (quoting Oneida Indian Nation of N. Y. State v. Oneida Cty., 414 U.S. at 667). Given this controlling precedent, the Tenth Circuit concludes that, because the United States could not show "clear and unambiguous intent by Congress to allow extinguishment of the aboriginal right of occupancy of the Jemez Pueblo . . . the grant of land to the Baca heirs was valid to convey the fee but the Baca heirs took the title subject to the Jemez Pueblo's aboriginal title." Pueblo of Jemez v. United States, 790 F.3d at 1161-62.

15. The Tenth Circuit also rejects the United States' assertion that Jemez Pueblo's claim to "actual, exclusive, and continuous" use of the Valles Caldera is "flatly inconsistent" with the Surveyor General's finding that the land was "vacant," because such an assertion "conflates the factual merits question of establishing aboriginal possession with the jurisdictional question on

[181]The Tenth Circuit notes that it is addressing the United States' arguments through the lens of "the rule of construction recognized without exception for over a century[,] . . . that if there is doubt whether aboriginal title has been validly extinguished by the United States, any doubtful expressions, instead of being resolved in favor of the United States, are to be resolved in favor of the Indians." Pueblo of Jemez v. United States, 790 F.3d at 1162 (internal citation and quotation marks omitted).

appeal of when a claim actually accrued." Pueblo of Jemez v. United States, 790 F.3d at 1163. The Tenth Circuit cites the Supreme Court's decision in United States v. Santa Fe Pacific Railroad Co., 314 U.S. 339 (1941)("Santa Fe"), as evidence that the establishment of the office of Surveyor General did not institute a policy of non-recognition of aboriginal title, because the Surveyor General could only make recommendations to Congress, and it was left to Congress to decide what action to take. See Pueblo of Jemez v. United States, 790 F.3d at 1163-64 (citing Santa Fe, 314 U.S. at 348). Thus, according to the Tenth Circuit, because the Surveyor General had no authority to extinguish aboriginal title, his belief as to vacancy of the lands is irrelevant. See Pueblo of Jemez v. United States, 790 F.3d at 1164.

16. The United States' argument that the 1860 Act evidenced Congressional intent to effect "absolute and unconditional" transfer not subject to preexisting interests also failed to persuade the Tenth Circuit, because, according to the Tenth Circuit, "the [Supreme] Court has never held that a grant needs to contain specific language stating the land remains subject to aboriginal title." Pueblo of Jemez v. United States, 790 F.3d at 1164. Instead, according to the Tenth Circuit, the Supreme Court has repeatedly concluded that "language [is] required in the grant to clearly show Congress's intent to extinguish aboriginal title." 790 F.3d at 1164. The United States' argument fails, therefore, because the Tenth Circuit "can discern no such language or intent in the 1860 Act." Pueblo of Jemez v. United States, 790 F.3d at 1164.

17. In addressing the United States' argument that the Baca heirs' use of the Valles Caldera is a cloud on title sufficient to trigger accrual against the United States in 1860, the Tenth Circuit counters that simultaneous occupancy and use of land pursuant to fee title, and aboriginal title, can occur, because the nature of Indian occupancy differs significantly from non-Indian

settlers' occupancy. See Pueblo of Jemez v. United States, 790 F.3d at 1165. The Tenth Circuit highlights such disparate use when it states that

> it is easy to see how the Surveyor General may have mistakenly believed the lands were vacant even if they were being used by the Jemez for hunting, fishing, and other such activities. Similarly, it is also easy to see how a peaceful and private Indian pueblo might have used portions of this large area of land for its traditional purposes while one agreeable rancher was using portions of it for grazing livestock.

Pueblo of Jemez v. United States, 790 F.3d at 1165. The Tenth Circuit notes that the Complaint makes such allegations and, therefore, the Tenth Circuit concludes that one cannot say that accrual necessarily occurred in 1860. See Pueblo of Jemez v. United States, 790 F.3d at 1165.

18. The Tenth Circuit notes, however, that, to establish on remand its right of aboriginal occupancy to the Valles Caldera "in 1860 and thereafter," Jemez Pueblo "must show 'actual, exclusive, and continuous use and occupancy for a long time.'" 790 F.3d at 1165-66 (quoting Native Vill. of Eyak v. Blank, 688 F.3d 619, 622 (9th Cir. 2012)). Significantly, according to the Tenth Circuit, the test's "exclusive" prong is relevant only to the exclusion of other Indian groups and, thus, the Bacas' use does not, as the United States' contends, cloud this prong. Pueblo of Jemez v. United States, 790 F.3d at 1166. As to the "actual and continuous use" requirement, the Tenth Circuit states that Jemez Pueblo

> must show, as it alleges in its Complaint, that the Jemez people have continued for hundreds of years to use the Valles Caldera for traditional purposes, including hunting, grazing of livestock, gathering of medicine and of food for subsistence, and the like. As the cases make clear, if there was actually substantial interference by others with these traditional uses before 1946, the Jemez Pueblo will not be able to establish aboriginal title. In that circumstance, moreover, the Pueblo would be barred by the ICCA statute of limitations for failing to bring a claim before the ICC.

Pueblo of Jemez v. United States, 790 F.3d at 1166. According to the Tenth Circuit, such a determination is necessarily a factual question. See 790 F.3d at 1166.

19. The Tenth Circuit concludes that gradual taking by the United States can extinguish aboriginal title. See 790 F.3d at 1166 (citing United States v. Pueblo of San Ildefonso, 513 F.2d at 1393 ("The Court of Claims' decision in *Pueblo of San Ildefonso* . . . is illustrative of a situation in which white settlement and use, authorized by the federal government . . . brought about a pre-1946 claim against the United States for failure to protect aboriginal title.")). The Tenth Circuit notes that, in the Zia I-IV litigation, Jemez Pueblo advanced a gradual taking theory when it "asserted that the United States owed [the Pueblos of Jemez, Zia, and Santa Ana] compensation for having extinguished their aboriginal titles as a matter of fact over time by interfering with their native use and occupancy." Pueblo of Jemez v. United States, 790 F.3d at 1167. In analyzing the Zia I-IV litigation, the Tenth Circuit agreed with the Court of Claims' finding that the creation of the Jemez Forest Reserve "and other conduct of the government sufficiently interfered with the pueblos' traditional ways of living so as to effect a taking of their aboriginal titles." Pueblo of Jemez v. United States, 790 F.3d at 1168. The Tenth Circuit stated that it could not reach such a conclusion, however, with respect to the present litigation given that,

> [a]t this point in the current proceedings, neither party has had the opportunity to offer evidence about whether anyone has actually interfered with the Jemez Pueblo's traditional occupancy and uses of the land in question here, before or after 1946. In sum, on the present record, we cannot say that either the Baca grant or use of the land by the Baca heirs or their successors establish as a matter of law that the Jemez Pueblo had a pre-1946 claim against the government under the ICCA.

790 F.3d at 1168.

20. The Tenth Circuit clarifies its holding in Navajo Tribe of Indians v. New Mexico by distinguishing the claim in that case from Jemez Pueblo's current claim in two respects, thereby rejecting the United States' assertion that the case is "directly on point." Pueblo of Jemez v. United

States, 790 F.3d at 1168. First, according to the Tenth Circuit, the claim in Navajo Tribe of Indians v. New Mexico was not one of aboriginal title but rather of title that two presidential Executive Orders granted; the President restricted the Executive Orders to conferring on Tribes only "transitory, possessory rights." Pueblo of Jemez v. United States, 790 F.3d at 1169. Second, according to the Tenth Circuit, the Navajo Tribe conceded that the President intended his Executive Orders to extinguish aboriginal title, whereas Jemez Pueblo contends that Congress never extinguished its title and that the United States has not established otherwise. See Pueblo of Jemez v. United States, 790 F.3d at 1169. The Tenth Circuit adds that, given that the taking in Navajo Tribe of Indians v. New Mexico occurred in 1911, at a time when the President's actions did not entitle the Navajo to compensation, the Navajo Tribe was on notice in 1946 that it had a claim based on the 1911 Orders. See Pueblo of Jemez v. United States, 790 F.3d at 1170.

21. The Tenth Circuit next rejects the United States' ICCA § 22 argument that the compensation which Jemez Pueblo received in the Zia I-IV litigation forecloses its claim to the Valles Caldera. See Pueblo of Jemez v. United States, 790 F.3d at 1170. The Tenth Circuit concludes that, because

> there is no evidence the Pueblo had a claim against the United States prior to 1946 with respect to the land involved in this action, we disagree with the government that the Jemez Pueblo could have brought its current claims before the ICC in the prior litigation. The government's res judicata argument fails because the Jemez Pueblo's current claim is a quiet title action to establish that its aboriginal title to different land has not been extinguished.

790 F.3d 1143 at 1171.

22. As to the United States' alternative argument that Jemez Pueblo's Complaint fails to allege facts sufficient to establish aboriginal title, and should therefore be dismissed under rule

12(b)(6), the Tenth Circuit holds that the Complaint's description of Jemez Pueblo's Valles Caldera use over the past 800 years "provides sufficient detail to put the government on notice of its claim of aboriginal title." Pueblo of Jemez v. United States, 790 F.3d at 1172. Moreover, the Tenth Circuit also rejects the United States' assertion that, to survive a rule 12(b)(6) motion, Jemez Pueblo needs to allege that it has "exercised the right to expel the Baca heirs or their successors-in-interest or that the Pueblo exercise[s] full dominion and control over the Baca Ranch." 790 F.3d at 1172. Such a requirement is unnecessary, the Tenth Circuit holds, "so long as the Pueblo alleged that it was also using the land in traditional Indian ways," which it does. 790 F.3d at 1172.

23. Finally, the Tenth Circuit rejects the United States' contention that the Preservation Act extinguishes aboriginal title "as a matter of law," because "nowhere in the Preservation Act did Congress say it intended to extinguish aboriginal title. Rather, . . . one of the purposes of the Act was to preserve the cultural and historic value of the land . . . while avoiding interference with 'Native American religious and cultural sites.'" Pueblo of Jemez v. United States, 790 F.3d at 1172 (quoting 16 U.S.C. § 698v-3(g)(2)(B)). Moreover, "the warranty deed the government accepted from the Baca successors to create the Preserve specifically excepted from the warrants all prior 'claims of and demands of any Indian nation, tribe, or pueblo.'" 790 F.3d at 1172 (quoting Brief of Appellant Pueblo of Jemez at 21, filed April 30, 2014 (Doc. 01019242516 on the Tenth Circuit's docket)). Nevertheless, the Tenth Circuit "leave[s] it to the district court to address . . . in the first instance on remand" whether the National Defense Authorization Act of 2015, 128 Stat. 3292 ("2015 Act"), which designated the Valles Caldera as a unit of the National Park System, "undisputedly extinguished any aboriginal title," as the United States' maintains. Pueblo of Jemez v. United States, 790 F.3d at 1173 n.21.

4. The Oct. 25 MOO.

24. In the Oct. 25 MOO, the Court denies Jemez Pueblo's request to exclude from trial evidence of Valles Caldera use after 1848 by other than Jemez Pueblo, because the Court concludes that the Tenth Circuit expressly instructed the Court to consider such evidence. See Pueblo of Jemez v. United States, Oct. 25 MOO at 1-2, 350 F. Supp. 3d 1052, 1056-57 (citing Pueblo of Jemez v. United States, 790 F.3d at 1165 ("Whether the Jemez Pueblo can establish that it exercised its right of aboriginal occupancy to these lands in 1860 and thereafter is a fact question to be established on remand, where it will have the opportunity to present evidence to support its claim.")).

25. The Court notes that, specifically, the Tenth Circuit instructed the Court to consider evidence necessary to determine whether Jemez Pueblo's Valles Caldera use was exclusive as to other Indian Tribes. See Pueblo of Jemez v. United States, Oct. 25 MOO at 2, 350 F. Supp. 3d at 1057 (citing Pueblo of Jemez v. United States, 790 F.3d at 1165 ("[T]he 'exclusive' part of the test mean[s] . . . that in order to establish aboriginal title, a tribe must show that it used and occupied the land to the *exclusion of other Indian groups*." (emphasis in original))).

26. The Tenth Circuit also instructed the Court to consider whether Jemez Pueblo's Valles Caldera use suffered interference by others after Congress granted the land to the Baca heirs in 1860. See Pueblo of Jemez v. United States, Oct. 25 MOO at 2, 350 F. Supp. 3d at 1057 (citing Pueblo of Jemez v. United States, 790 F.3d at 1166 ("[I]f there was actually substantial interference by others with these traditional uses before 1946, the Jemez Pueblo will not be able to establish aboriginal title.")).

27. The Court also concludes that, because the expert report that Kehoe authored contains relevant evidence of multiple Pueblos' Valles Caldera use, the Court will not exclude the report's substance. See Oct 25 MOO at 2-3, 350 F. Supp. 3d at 1057 (citing Expert Report of Dr. Terence Kehoe at 19-20, filed August 31, 2018 (Doc. 249-1)).

5. The Nov. 15 MOO.

28. In the Nov. 15 MOO, the Court concludes that the Federal Rules of Evidence do not permit the Court to admit out-of-court statements in American Indian oral tradition evidence when offered for the truth of the matter asserted, because the rule against hearsay prohibits such statements. See Nov. 15 MOO at 2, 366 F. Supp. 3d at 1237 (citing Fed. R. Evid. 802 ("Hearsay is not admissible unless any of the following provides otherwise: a federal statute; these rules; or other rules prescribed by the Supreme Court.")).

29. The Court concludes that it may admit oral tradition evidence for non-hearsay purposes, if Jemez Pueblo can establish a non-hearsay purpose, such as background, for why Jemez Pueblo members believe things, do things, draw, or paint things, and that it also will admit hearsay statements in oral tradition evidence for the truth of the matter asserted pursuant to the hearsay exceptions enumerated in rule 803 of the Federal Rules of Evidence, provided such statements conform to the limited scope of each exception, as the Federal Rules of Evidence define the exception. See Nov. 15 MOO at 2, 366 F. Supp. 3d at 1238-39 (citing Fed. R. Evid. 803)).

30. The Court concludes that it will not admit, however, hearsay in oral tradition evidence pursuant to rule 807 of the Federal Rules of Evidence, the residual exception to the rule against hearsay, because the Court concludes that oral tradition evidence is not sufficiently exceptional to warrant admission pursuant to this rule. See Nov. 15 MOO at 2, 366 F. Supp. 3d at

1239 (citing Conoco Inc. v. Dep't of Energy, 99 F.3d 387, 392 (Fed. Cir. 1996)(concluding that the residual hearsay exception is "meant to be reserved for exceptional cases," and is "not intended to confer 'a broad license' on trial judges 'to admit hearsay statements that do not fall within one of the other exceptions contained in rules 803 and 804(b)'" (quoting S. Rep. No. 94-199, at 20 (1975)))).

6. The Court View Order.

In the Court View Order, the Court grants in part and denies in part Jemez Pueblo's request that the Court conduct a one-day site visit to the Valles Caldera to see first-hand the land at issue.[182]

[182]The Court further considered Jemez Pueblo's request during a hearing held on September 14, 2018. See Transcript of Hearing at 34:13-36:11 (taken September 14, 2018), filed September 21, 2018 (Doc. 278)(Court); id. at 43:4-13 (Court); id. at 44:6-18 (Court); id. at 87:22-88:10 (Court). At the hearing, the Court expressed that a site view has evidentiary value, provided that the parties agree on a balanced and ethical itinerary. See, e.g., 34:13-36:11 (Court); id. at 43:4-13 (Court); id. at 44:6-18 (Court); id. at 87:22-88:10 (Court). The Court approved the parties' itinerary, see Clerk's Minutes, filed September 28, 2018 (Doc. 296)("Sept. 28 Clerk's Minutes"), and conducted the site view on September 28, 2018, and on September 29, 2018, see Draft Transcript of Aerial Site Visit at 1:11-12, taken September 28, 2018; Draft Transcript of Valles Caldera Tour at 1:11-12, taken September 29, 2018. The Court's citations to the Draft Transcript of Aerial Site Visit and to the Draft Transcript of Valles Caldera Tour refer to the court reporter's original, unedited versions. Any final transcripts may contain slightly different page and/or line numbers.

On the morning of the site view's first day, the Court flew over the Jemez River, Jemez River Valley, and the Valles Caldera, including Redondo Peak. See Sept. 28 Clerk's Minutes at 1. That afternoon, the Court toured Zia Pueblo, Walatowa, and several historic sites that ancestral Jemez Pueblo members occupied from the 1300s to the 1650s. See Sept. 28 Clerk's Minutes at 1-2. On the site view's second day, the Court toured several locations within the Valles Caldera proper, including Redondo Meadows, the Banco Bonito, the Valles Grande, the Valle Jaramillo, the Valles San Antonio, and Sulphur Springs. See Sept. 28 Clerk's Minutes at 2-3. Moreover, the Court observed Santa Clara Pass and Santa Clara Pueblo's conservation and access easement as well as the location of NMGC's Pipeline System. See Sept. 28 Clerk's Minutes at 2.

See Court View Order at 1-2 (citing Plaintiff Pueblo of Jemez's Motion and Memorandum in Support of Motion for Court View of Valles Caldera, filed August 7, 2018 (Doc. 225)).

7. The Expert Witness Order.

31. In the Expert Witness Order, the Court concludes that Jemez Pueblo may elicit from Ferguson opinion testimony at trial that relies on information from Jemez Pueblo member Frank Fragua, despite Jemez Pueblo not disclosing Fragua to the United States, because the four factors that the Tenth Circuit advises district courts to consider in Woodworker's Supply, Inc. v. Principal Mutual Life Insurance Co., 170 F.3d 985 (10th Cir. 1999)("Woodworker's"), suggest that Jemez Pueblo's failure to identify Fragua is both justified and harmless,[183] and because the Court will permit the United States to depose Fragua and thereby cure any potential prejudice. See Expert Witness Order at 2-3 (citing Woodworker's, 170 F.3d at 993 ("The determination of whether a Rule 26(a) violation is justified or harmless is entrusted to the broad discretion of the district court.")).

32. Regarding Woodworker's four factors as applied to Ferguson's testimony, the Court concludes:

> First, Jemez Pueblo did not direct Dr. Ferguson to interview Fragua, see [Draft Transcript of Hearing[184]] at 35:24-36:10 [(taken Oct. 11, 2018)("Oct. 11 Tr.")](Barnhouse), and both Jemez Pueblo and the United States became aware of

[183]In determining whether a rule 26 of the Federal Rules of Civil Procedure violation is either justified or harmless, the Tenth Circuit advises district courts to consider: "(1) the prejudice or surprise to the party against whom the testimony is offered; (2) the ability of the party to cure the prejudice; (3) the extent to which introducing such testimony would disrupt the trial; and (4) the moving party's bad faith or willfulness." Woodworker's, 170 F.3d at 993.

[184]The Court's citations to the transcript of the hearing refer to the court reporter's original, unedited version. Any final transcript may contain slightly different page and/or line numbers.

> Fragua only upon receipt of Dr. Ferguson's expert report on March 22, 2018, see [United States' Motion in Limine, filed August 17, 2018 (Doc. 230); United States' Motion in Limine, filed August 21, 2018 (Doc. 239)[185]] at 9; [Oct. 11] Tr. at 36:8-15 (Barnhouse, Court). Both parties thus bore equally any resulting surprise. Second, the Court is giving the United States the opportunity to depose Fragua, which will cure any potential prejudice. Third, Fragua provided information regarding [redacted]; however, [redacted]; hence, much of, if not all of, the testimony derived from the Fragua interview would be cumulative at trial and thus not disruptive, see [Oct. 11] Tr. at 38:25-39-5 (Barnhouse, Court). Finally, Jemez Pueblo's failure to disclose Fragua was neither willful nor in bad faith.

Expert Witness Order at 3.

33. The Court next concludes that Jemez Pueblo may elicit from Liebmann opinion testimony at trial that relies on Roney's analysis of a portion of the Valles Caldera's ceramics collection, which the United States first discovered during Liebmann's deposition, because the Court concludes that Woodworker's four factors likewise advise against excluding the portions of Liebmann's testimony that rely on Roney's analysis and summarized findings, and because the Court will permit the United States to identify Roney's knowledge and methods before trial through deposition. See Expert Witness Order at 3-4 (citing Woodworker's, 170 F.3d at 993).

34. Regarding Woodworker's four factors as applied to Liebmann's testimony, the Court concludes:

> First, Roney's assistance to Dr. Liebmann did not surprise the United States, because the United States provided dates for Roney to inspect ceramics at the Valles Caldera. See [Oct. 11] Tr. at 51:14-24 (Court, Leonard). Second, the Court will permit the United States to depose Roney regarding his credibility, principles, and methodology, and thereby cure any potential prejudice. See [Oct. 11] Tr. at 63:13-14 (Court). Third, permitting the portions of Dr. Liebmann's testimony that rely on Roney's findings will not disrupt the trial, because such reliance goes to the weight of Dr. Liebmann's testimony, which the United

[185]Doc. 239 is the unredacted version of Doc. 230.

> States can challenge on cross examination. Fourth, neither party has alleged any bad faith or willfulness.

Expert Witness Order at 4.

8. The SJ Order.

35. In the SJ Order, the Court denies the United States' motions for summary judgment. See SJ Order at 2. The Court first concludes that whether other Tribes used the Valles Caldera does not per se defeat Jemez Pueblo's claim to aboriginal title over that land and that genuine issues of material fact remain regarding the extent of other Tribes' Valles Caldera use. See SJ Order at 2. The Court notes that, although the Tenth Circuit in this case stated that, to establish aboriginal title, a Tribe "must show that it used and occupied the land to the *exclusion of other Indian groups*," Pueblo of Jemez v. United States, 790 F.3d at 1165-66 (emphasis in original)(internal quotation marks omitted), the exclusive-use-and-occupancy rule is subject to exceptions for joint-and-amicable use, dominant use, and permissive use, see Alabama-Coushatta Tribe of Tex. v. United States, No. 3-83, 2000 WL 1013532, at *12 (Fed. Cl. June 19, 2000).[186] The Court concludes, therefore, that evidence of other Pueblos' Valles Caldera use will not necessarily defeat Jemez Pueblo's aboriginal title claim.

[186]The Court of Appeals, Court of Claims, Claims Court, and Court of Federal Claims cases that discuss the joint-and-amicable use exception, the dominated use exception, and the permissive use exception to the exclusive-use-and-occupancy rule are not binding precedent; however, the Court concludes that these cases have persuasive value with respect to joint aboriginal title claims and, thus, will assist the Court in its disposition of the case. Moreover, the Court notes that the Tenth Circuit in this case cites favorably to numerous out-of-circuit and lower court cases, several of which discuss exceptions to the exclusive-use-and-occupancy rule, including Native Vill. of Eyak v. Blank, 688 F.3d 619, 622 (9th Cir. 2012; Wichita Indian Tribe v. United States, 696 F.2d 1378, 1385 (Fed.Cir. 1983); United States v. Pueblo of San Ildefonso, 513 F.2d 1383; Sac & Fox Tribe of Indians of Okla. v. United States, 383 F.2d 991, 998 (Ct. Cl. 1967).

36. The Court notes that Jemez Pueblo asserts that its "use of the Valles Caldera was dominant," and that "any conflicting aboriginal title claims . . . were extinguished when Jemez Pueblo entered the area or have been abandoned," and concludes that Jemez Pueblo could maintain its aboriginal title claim through evidence that supports such assertions. SJ Order at 3 (citing Plaintiff Pueblo of Jemez's Response in Opposition to Defendant United States' Motion on the Pleadings and for Summary Judgment at 19-20, filed August 31, 2018 (Doc. 250)("SJ Response")). Moreover, given the Tenth Circuit's mandate that Jemez Pueblo "will have the opportunity to present evidence to support its claim" that "it exercised its right of aboriginal occupancy to [the Valles Caldera] in 1860 and thereafter," the Court will permit Jemez Pueblo to present and challenge evidence regarding when, where, and how often other Tribes' Valles Caldera use occurred. SJ Order at 3 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1165).

37. The Court concludes that Jemez Pueblo's admission that third-party owners interfered with its Valles Caldera use does not defeat Jemez Pueblo's aboriginal title claim. See SJ Order at 3. The Court notes that, although the Tenth Circuit has directed the Court to determine whether there was "actually substantial interference by others" with Jemez Pueblo's traditional uses of the Valles Caldera, Pueblo of Jemez v. United States, 790 F.3d at 1166, and mentions that substantial interference could result from "white settlement and use, authorized by the federal government both statutorily and in fact," 790 F.3d at 1166 (citing United States v. Pueblo of San Ildefonso, 513 F.2d 1383, 1393 (Ct. Cl. 1975)), controlling Supreme Court of the United States of America precedent compels the Court to interpret the Tenth Circuit's statement to indicate that aboriginal title extinguishment could result only from Congressionally authorized interference with Jemez Pueblo's traditional Valles Caldera use, see SJ Order at 4 (citing Santa Fe, 314 U.S. at

347 (1941)("Extinguishment of Indian title based on aboriginal possession is of course a different matter. The power of Congress in that regard is supreme."); Cty. of Oneida v. Oneida Indian Nation, 470 U.S. 226, 247-48 (1985)("[C]ongressional intent to extinguish Indian title must be 'plain and unambiguous,' and will not be 'lightly implied.'" (quoting Santa Fe, 314 U.S. at 346, 354))).

38. Based on the Tenth Circuit's mandate to consider evidence of "substantial interference by others," Pueblo of Jemez v. United States, 790 F.3d at 1166, the Court identifies five factors, none of which by itself is dispositive, that could support a finding that non-Indians substantially interfered with aboriginal title over time so as to effectuate a gradual taking absent express Congressional intent: (i) the creation of an Indian reservation; (ii) Congressionally authorized non-Indian settlement of historic Tribal lands; (iii) a Congressionally ratified Executive Order increasing the size of reservation lands set aside for exclusive Indian use; (iv) a cabinet-level order, pursuant to a Congressional act, imposing restrictions on Indian use of their historic lands; and (v) Congressional or executive action designating Tribal land for conservation, recreation, or commercial use, such as a forest reserve, grazing district, or the like, see SJ Order at 4-5 (citing United States v. Pueblo of San Ildefonso, 513 F.2d at 1386-90; Gila River Pima-Maricopa Indian Cmty. v. United States, 494 F.2d 1386, 1391-93 (Ct. Cl. 1974)).

39. The Court notes that each of the above factors, which the Court derived from the cases that the Tenth Circuit cited in Pueblo of Jemez v. United States, involves some Congressional action, either directly or through the President, that significantly affects an Indian Tribe's use of its historic lands. See SJ Order at 5. In this way, the Court of Claims never completely abrogated the need for Congressional intent to extinguish aboriginal title, but rather found that Congressional

intent was implied based on various actions offensive to aboriginal use and possession. See SJ Order at 5.

40. The Court concludes that, because neither party in this case has suggested that Congress has expressly extinguished aboriginal title to the Valles Caldera, the Court will permit both parties to present evidence to support or refute the five above-mentioned factors, each of which support the Tenth Circuit's mandate to consider evidence of "substantial interference by others" with Jemez Pueblo's traditional Valles Caldera use. Pueblo of Jemez v. United States, 790 F.3d at 1166. SJ Order at 5.

41. The Court concludes that no statutes of limitations bar Jemez Pueblo's aboriginal title claim. See SJ Order at 5. In addressing the United States' argument that the Baca heirs' Valles Caldera use is a cloud on title sufficient to trigger accrual against the United States in 1860, the Court directs the parties to the Tenth Circuit's statement that "simultaneous occupancy and use of land pursuant to fee title, and aboriginal title, can occur, because the nature of Indian occupancy differs significantly from non-Indian settlers' occupancy." SJ Order at 6 (citing Pueblo of Jemez v. United States, 790 F.3d at 1165). The Court emphasizes that the Tenth Circuit expressly permits such disparate use when it states that "'it is . . . easy to see how a peaceful and private Indian pueblo might have used portions of this large area of land for its traditional purposes while one agreeable rancher was using portions of it for grazing livestock.'" SJ Order at 6 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1165).

42. The Court states that, because Jemez Pueblo argues that Jemez people "alive during both periods of Bond and Dunigan ownership" continued to access the Valles Caldera for traditional purposes, to include hunting game, taking eagles, and conducting religious pilgrimages

to Redondo Peak, SJ Order at 6 (quoting Response at 22-23), and that "its claim accrued only when the United States acquired an interest in the Valles Caldera in 2000 and began limiting the Jemez Pueblo's access to the land in a manner inconsistent with its aboriginal title," SJ Order at 6 (quoting Response at 27 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1152)), the Court is not convinced that, as a matter of law, a taking occurred between 1860 and 2000, and, therefore, will not bar Jemez Pueblo's claim based on the United States' theory that the statute of limitations accrued, see SJ Order at 6.

43. The Court concludes that Santa Clara Pueblo is not a necessary and indispensable party such that the Court must dismiss the case pursuant to rule 19 of the Federal Rules of Civil Procedure. See SJ Order at 6. The Court quotes Jemez Pueblo's assertion that it "does not make any claim to the land transferred by the Dunigans to Santa Clara Pueblo, or the reciprocal easement transferred by the Dunigans directly to Santa Clara Pueblo," SJ Order at 6 (citing Response at 33), and concludes that Santa Clara Pueblo's absence does not prevent Jemez Pueblo from receiving its requested relief against the United States, see SJ Order at 6. The Court further concludes that the Indian lands exception to the QTA precludes the Court from entering judgment that would affect Santa Clara Pueblo's easement. See SJ Order at 6-7 (citing Block v. North Dakota ex rel. Bd. of Univ. and Sch. Lands, 461 U.S. 273, 287 (1983)("Block v. North Dakota")(affirming that, pursuant to the QTA, the United States does not waive sovereign immunity where the land either is held in "trust or [is] restricted Indian lands")).

44. The Court expresses its confidence in the United States' ability to robustly defend against Jemez Pueblo's aboriginal title claim, and thereby defend Santa Clara Pueblo's interests in the United States' continued stewardship of the Valles Caldera. See SJ Order at 7.

45. The Court concludes that the doctrine of laches[187] does not bar Jemez Pueblo's claims pursuant to the QTA, which provides for a twelve-year statute of limitations, because Congress enacted a statute of limitations in the QTA, and because Jemez Pueblo brought its claims within the statutorily prescribed limitations period. See SJ Order at 7 (citing United States v. Rodriguez-Aguirre, 264 F.3d 1195, 1208 (10th Cir. 2001)("When a limitation on the period for bringing suit has been set by statute, laches will generally not be invoked to shorten the statutory period.")).

46. The Court further concludes that the period between 2000 and when Jemez Pueblo filed its Complaint does not represent the "longstanding observances and settled expectations" at issue in City of Sherrill v. Oneida Indian Nation of New York, 544 U.S. 197 (2005), wherein the Supreme Court noted that "[i]t has been two centuries since the Oneidas last exercised regulatory control over the properties," and thereafter applied laches to bar the Oneida's claim that its land purchases unified the land's fee and aboriginal title such that the Oneidas could assert sovereign authority over the recently reacquired property. SJ Order at 8 (quoting City of Sherrill v. Oneida Indian Nation of New York, 544 U.S. at 200 (internal quotation marks omitted)).

9. The Partial SJ Order.

47. In the Partial SJ Order, Court first concludes that genuine issues of material fact remain regarding the extent of other Tribes' Banco Bonito use and, therefore, declines to enter partial summary judgment in Jemez Pueblo's favor as to the Banco Bonito. See Partial SJ Order

[187]Laches "bars a party's dilatory claim . . . when there is: '(1) lack of diligence by the party against whom the defense is asserted, and (2) prejudice to the party asserting the defense.'" Biodiversity Conservation All. v. Jiron, 762 F.3d 1036, 1090-91 (10th Cir. 2014)(quoting Nat'l R.R. Passenger Corp. v. Morgan, 536 U.S. 101, 122 (2002)).

at 2. The Court notes that, to establish its right to the Banco Bonito, Jemez Pueblo must show "actual, exclusive, and continuous use and occupancy for a long time." Partial SJ Order at 2 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1165 (internal quotation marks omitted)(quoting Sac & Fox Tribe of Indians of Okl. v. United States, 383 F.2d 991, 998-99 (Ct. Cl. 1967))). Although Jemez Pueblo asserts that its Banco Bonito use "was exclusive," in part, because "[t]here was no archeological evidence that any other tribe used and occupied Banco Bonito," which, according to Jemez Pueblo, indicates that "Jemez controlled the area as to any other tribes," the Court notes that dispute remains regarding whether the Pueblos of Jemez, Santa Ana, and Zia jointly used the Banco Bonito, which, if true, could defeat Jemez Pueblo's claim to exclusive use. See Partial SJ Order at 2 (quoting Plaintiff Pueblo of Jemez's Motion for Partial Summary Judgment Confirming Its Indian (Aboriginal) Title to the Banco Bonito and Redondo Mountain, filed August 17, 2018 (Doc. 237); Plaintiff Pueblo of Jemez's Motion for Partial Summary Judgment Confirming Its Indian (Aboriginal) Title to the Banco Bonito and Redondo Mountain at 22, filed August 17, 2018 (Doc. 238)(collectively the "Partial SJ Motion")).[188]

48. The Court also concludes that genuine issues of material fact remain regarding the extent of other Tribes' Redondo Peak use, and so the Court cannot enter properly partial summary judgment in Jemez Pueblo's favor as to that land. See Partial SJ Order at 2. Although Jemez Pueblo asserts that its Redondo Mountain use "is exclusive because, even if other tribes historically used Redondo, which is disputed, it is undisputed that other tribes have not used Redondo Mountain in at least the past eighteen years or, to the extent there may be other minimal use by a

[188]Doc. 238 is the unredacted version of Doc. 237.

tribe, Jemez's uses were dominant," Partial SJ Motion at 24; the Court notes that both Santa Clara Pueblo and the Zia Pueblo have stated that they hold Redondo Mountain sacred, and continue to use it for traditional purposes without concern for Jemez Pueblo's use, which, if true, could defeat Jemez Pueblo's aboriginal title claim, see Partial SJ Order at 3. The Court quotes from the portion of the September 14, 2018, hearing wherein the Court notes that "agents of Jemez . . . at one time or another, seemed to indicate that other people were using [Redondo] mountain." Transcript of Hearing at 65:5-8 (taken September 14, 2018), filed September 21, 2018 (Doc. 278)(Court). Although other Tribes' Redondo Mountain use does not per se defeat Jemez Pueblo's claim to aboriginal title over that land, the Court concludes that it cannot as a matter of law grant Jemez Pueblo's motion for partial summary judgment. See Partial SJ Order at 3.

10. The Bench Trial.

49. The Court held a bench trial on October 29-November 20, 2018; November 29 November 30, 2018; December 3, 2018; December 5, 2018; and December 13, 2018. See Bench Trial Minutes at 1-3.

50. At trial, Jemez Pueblo presented the testimony of four expert witnesses and fourteen fact witnesses through live testimony. See Bench Trial Minutes at 4-45.

51. The United States presented the testimony of four expert witnesses and nine fact witnesses through live testimony. See Bench Trial Minutes at 4-45.

52. The parties also entered into evidence twelve witnesses' testimony through deposition designations, subject to objections raised to the exhibits containing the designated portions of the deposition transcripts. See Bench Trial Minutes at 8, 37, 43, 44.

53. Neither party challenged any expert's qualifications to offer opinion testimony. See Bench Trial Minutes at 4-45.

11. Jemez Pueblo's Post Trial Brief.

54. In its post-trial brief, Jemez Pueblo first argues that, in accord with controlling Supreme Court and Tenth Circuit precedent, it presented facts which confirm that Jemez Pueblo possesses unextinguished aboriginal title to the entire Valles Caldera. See Plaintiff Pueblo of Jemez's Closing Brief at 1, filed May 6, 2019 (Doc. 391)("Jemez Pueblo's Br."). In contrast, asserts Jemez Pueblo, the United States asks the Court to disregard precedent, controlling law, and the evidentiary record to reach the opposite conclusion. See Jemez Pueblo's Br. at 1.

55. Jemez Pueblo argues that judicial estoppel precludes the United States' argument that Jemez Pueblo's aboriginal title to the Valles Caldera is extinguished. See Jemez Pueblo's Br. at 2. According to Jemez Pueblo, in New Hampshire v. Maine, 532 U.S. 742 (2001), an unanimous Supreme Court concludes that judicial estoppel is available against a sovereign and identifies factors that courts should consider in determining whether to apply the doctrine. See Jemez Pueblo's Br. at 2 (citing New Hampshire v. Maine, 532 U.S. at 743). Jemez Pueblo directs the Court to several out-of-circuit cases that, according to Jemez Pueblo, conclude that courts may apply judicial estoppel regardless whether the United States is a party, because governments are duty-bound to deal honestly with their citizens and because the judiciary has an independent duty to preserve the law's integrity. See Jemez Pueblo's Br. at 4-5 (citing Reid v. United States INS, 949 F.2d 287, 288 (9th Cir. 1991); United States v. Owens, 54 F.3d 271, 275 (6th Cir. 1995); Reynolds v. Comm'r. of Internal Rev., 861 F.2d 469 (6th Cir. 1988); Brandt v. Hickel, 427 F.2d 53, 57 (9th Cir. 1970); ("To say to these appellants, 'The joke is on you. You shouldn't have

trusted us,' is hardly worthy of our great government."); Menges v. Dentler, 33 Pa. 495, 500 (1859)("Men naturally trust in their government, and ought to do so, and they ought not to suffer for it.").

56. Jemez Pueblo argues that the Court should estop the United States from arguing that Jemez Pueblo does not have aboriginal title to the Valles Caldera, because, in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, the United States asserts, according to Jemez Pueblo, that Jemez Pueblo's aboriginal title to water rights is unextinguished, and aboriginal title to water necessarily includes aboriginal title to land. See Jemez Pueblo's Br. at 5-6 (citing United States' Proposed Conclusions of Law ¶¶ 44-54, at 10-12, filed April 15, 2019 (Doc. 385)). Another reason that the Court should apply the estoppel doctrine, argues Jemez Pueblo, is because, in this case, the United States advocates for a substantial-interference extinguishment standard, but, in other, pending litigation, the United States has argued for the clear-and-unambiguous-act-of-Congress standard. See Jemez Pueblo's Br. at 6-7.

57. Jemez Pueblo argues that the United States' positions in this case and in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman create the perception that the United States has misled either the Court or the Honorable Martha Vázquez, United States District Judge for the United States District Court for the District of New Mexico, and that such a perception is a factor that courts should consider in determining whether to apply judicial estoppel. See Jemez Pueblo's Br. at 12-14 (citing New Hampshire v. Maine, 532 U.S. at 751; Bradford v. Wiggins, 516 F.3d 1189, 1194 (10th Cir. 2008)). Jemez Pueblo adds that the United States' positions give the United States an unfair advantage over and impose an unfair detriment on Jemez

Pueblo, which also counsels in estoppel's favor. See Jemez Pueblo's Br. at 14-16 (citing New Hampshire v. Maine, 532 U.S. at 751.

58. Jemez Pueblo argues that a further factor which the Court should consider in weighing whether to impose estoppel is that, by taking inconsistent positions in litigation involving Jemez Pueblo's aboriginal rights, the United States violates its fiduciary obligations to defend Jemez Pueblo's interests as a trustee. See Jemez Pueblo's Br. at 16-17 (citing Ann C. Juliano, Conflicted Justice: The Department of Justice's Conflict of Interest in Representing Native American Tribes, 37 Ga. L. Rev. 1307 (2003)).

59. Jemez Pueblo argues that it has met its burden to prove by a preponderance of the evidence that it established aboriginal Indian title to the Valles Caldera, in part, because Jemez Pueblo members testified to actual Valles Caldera use, and because its expert witnesses, such as Ferguson, García y Griego, and Liebmann, testified that such use has occurred for a long time, which Anschuetz conceded, according to Jemez Pueblo. See Jemez Pueblo's Br. at 18 (citing Jemez Pueblo's Proposed Findings ¶¶ 166-74, 286-310, 350-53, 355-82, 385-89, 397, 401, 411-14, 437-40, at 66-70, 103-08, 118-28, 130, 133-34, 139-40.). Moreover, according to Jemez Pueblo, fourteen other Pueblos and Tribes, and four Tribal organizations, confirmed that Jemez Pueblo has a reputation in the American Indian community as the Valles Caldera's aboriginal owner. See Jemez Pueblo's Br. at 18-19.

60. Jemez Pueblo asserts that it drove other Tribes from the Valles Caldera when its ancestors migrated to the area and that, ever since, it has dominated and defended those lands, including from multiple Navajo Nation attacks. See Jemez Pueblo's Br. at 19 (citing Jemez Pueblo's Proposed Findings ¶¶ 424-31, 441-46, 477-86, at 138, 140-41, 146-47). Jemez Pueblo

adds that it is the only Tribe that has lived in the Valles Caldera, which its hundreds of Banco Bonito fieldhouses evidence. See Jemez Pueblo's Br. at 19 (citing Jemez Pueblo's Proposed Findings ¶¶ 432-33, at 138).

61. Jemez Pueblo argues that the ceramics and obsidian record shows Jemez Pueblo's dominant and exclusive Valles Caldera use from approximately 1300 to 1680 C.E. See Jemez Pueblo's Br. at 19 (citing Jemez Pueblo's Proposed Findings ¶¶ 487-508, at 147-52).

62. Jemez Pueblo argues that [redacted] confirms Jemez Pueblo's continued Valles Caldera use, because no Jemez Pueblo member has seen or heard from oral history that [redacted] See Jemez Pueblo's Br. at 19 (citing Jemez Pueblo's Proposed Findings ¶¶ 434-40, 521-33, at 139-40, 156-60; United States' Proposed Findings at ¶ 315, at 85 ("[redacted])).

63. Jemez Pueblo argues that the United States did not meet its burden to show that Congress clearly and unambiguously extinguished Jemez Pueblo's aboriginal title. See Jemez Pueblo's Br. at 20 (citing Santa Fe, 314 U.S. at 353-54; Pueblo of Jemez v. United States, 790 F.3d at 1170; Oct 25 MOO at 114, 350 F. Supp. 3d at 1052, 1116 n.37), and instead relitigates arguments that the Tenth Circuit rejected on appeal, specifically that Jemez Pueblo's decision not to bring its Valles Caldera claim before the ICC bars Jemez Pueblo from bringing that claim here, see Jemez Pueblo's Br. at 20-21 (citing United States' Proposed Conclusions ¶¶ 114-115, at 28 ("This Court lacks subject matter jurisdiction because Plaintiff's claims are jurisdictionally barred by Section 22 of the Indian Claims Commission Act."), and that the 1860 Baca Grant, or Surveyor General's underlying findings, could extinguish Jemez Pueblo's aboriginal Indian title, but ignores direct

rulings rejecting this argument, see Jemez Pueblo's Br. at 20-21 (citing United States' Proposed Conclusions ¶¶ 44-54, at 10).

64. Jemez Pueblo argues that the United States' Proposed Conclusions ignore established law and the controlling law of the case, and instead ask the Court to create its own legal standards. See Jemez Pueblo's Br. at 22 (citing United States v. Graham, 704 F.3d 1275, 1278 (10th Cir. 2013)("Under the 'law of the case' doctrine, when a court rules on an issue of law, the ruling 'should continue to govern the same issues in subsequent stages in the same case.'" (quoting Arizona v. California, 460 U.S. 605, 618 (1983))). The United States evidences such disregard, according to Jemez Pueblo, when it asserts "that 'the only interest created by aboriginal Indian title is a permissive right of occupancy subject to the will of the sovereign and valid only against third parties,'" Jemez Pueblo's Br. at 24 (quoting United States' Proposed Conclusions ¶ 9, at 2), which Jemez Pueblo argues not only ignores the Tenth Circuit's ruling, but also radically reinterprets controlling law that: (i) aboriginal Indian title predates any title to which the United States may assert; (ii) the United States can extinguish aboriginal title only through clear-and-unambiguous Congressional action; and (iii) the Tenth Circuit has confirmed Jemez Pueblo's right to bring this action against the United States, see Jemez Pueblo's Br. at 24. Jemez Pueblo adds that no court has agreed with the United States' assertion that aboriginal title is meaningless unless the United States chooses to recognize it. See Jemez Pueblo's Br. at 24 (citing United States' Proposed Conclusions ¶ 8, at 2 ("Unless otherwise specified by an act of Congress, aboriginal rights prevail only against parties other than the United States."); id. ¶ 9, at 2 ("[U]nrecognized aboriginal title alone does not confer upon Jemez Pueblo any authority to accomplish that which it seeks through this lawsuit . . . ."). According to Jemez Pueblo, the United States is asking the

Court to ignore precedent which recognizes that aboriginal title preexists and, therefore, does not require the United States' recognition. See Jemez Pueblo's Br. at 25-26.

65. Jemez Pueblo argues that the United States has not proposed a finding of fact which asserts that the Baca heirs or successors took any action that actually and substantially interfered with Jemez Pueblo's Valles Caldera use, and was connected to a Congressional act intended to extinguish Jemez Pueblo's aboriginal title to the Valles Caldera, and instead asserts merely that, during the time period before 1946, Jemez Pueblo's Valles Caldera use changed, because the Valles Caldera's private owners charged Jemez Pueblo to graze livestock, see Jemez Pueblo's Br. at 27-28 (citing United States' Proposed Findings ¶ 105, at 29), and required Jemez Pueblo members to ask permission to use the lands for traditional purposes, see Jemez Pueblo's Br. at 27-28 (citing United States' Proposed Findings ¶ 106, at 28). The United States neither argues, according to Jemez Pueblo, that such conditions resulted in Jemez Pueblo using the Valles Caldera less nor identifies a specific date on which it alleges that these restrictions extinguished Jemez Pueblo's title, nor what possible Congressional act could "serve as the 'plain and unambiguous [congressional] action' required to extinguish aboriginal Indian title." Jemez Pueblo's Br. at 28 (quoting Santa Fe, 314 U.S. at 346; Oneida Cty. v. Oneida Indian Nation, 470 U.S. 226, 248 (1985)(brackets in Jemez Pueblo's Br.)). Hence, Jemez Pueblo concludes, without "substantial interference," the Court cannot determine that Jemez Pueblo's Valles Caldera claim accrued before the ICCA statute of limitations period expired. Jemez Pueblo's Br. at 29.

66. Jemez Pueblo reminds the Court that the Court has already concluded that "the ICC cases 'do not provide sufficient precedential value to control the Court in this case' . . . and 'are merely persuasive authority, and . . . are not very persuasive, because the issue . . . whether a

taking occurred was neither contested nor adjudicated in the Court of Claims' opinions.'" Jemez Pueblo's Br. at 29 (quoting Pueblo of Jemez v. United States, Oct. 25 MOO at 119 n.39, 350 F. Supp. 3d at 1119 n.39). Jemez Pueblo adds that the ICC lacked jurisdiction to adjudicate claims involving unextinguished aboriginal title. See Jemez Pueblo's Br. at 29 (citing ICCA, 60 Stat. 1049, § 2). Jemez Pueblo then asserts that the conflict of interest between the United States and claims attorneys, who filed stipulations that transformed Tribes' damages claims into fictitious takings claims to obtain ICC awards for fictitious takings, resulted in caselaw that disregards Supreme Court precedent. See Jemez Pueblo's Br. at 30-31 (citing Pueblo of Santo Domingo v. United States, 647 F.2d 1087, 1090-91 (Ct. Cl. 1981)(Nichols, J., dissenting); Gila River Pima-Maricopa Indian Cmty., 494 F.2d at 1394 (Nichols, J., concurring)).

67. Jemez Pueblo argues that the United States ignores that the Valles Caldera was not at issue before the ICC in either Jemez Pueblo's joint action with Santa Ana Pueblo and Zia Pueblo, or in Santa Clara Pueblo's, San Ildefonso Pueblo's, and Jicarilla Apache Tribe's actions, and, therefore, the ICC did not make any conclusions regarding the Valles Caldera, which suggests, according to Jemez Pueblo, that the United States' argument that other Pueblos' ICC litigation precludes Jemez Pueblo's Valles Caldera claim is inapposite. See Jemez Pueblo's Br. at 32-34.

68. Jemez Pueblo argues that the statute of limitations within the Indian Tucker Act, 28 U.S.C. § 1505, does not bar Jemez Pueblo's Valles Caldera claim, because "[n]othing happened between 1946 and 2000 that triggered the running of that statute of limitations," and "[t]he Tenth Circuit has already denied the Government's parallel argument with regard to ICCA Section 22." Jemez Pueblo's Br. at 34 (citing Pueblo of Jemez v. United States, 790 F.3d at 1171.

69. Jemez Pueblo argues that the Tenth Circuit has already rejected the United States' argument that the 1860 land grant to the Baca heirs extinguished Jemez Pueblo's aboriginal title to the Valles Caldera, see Jemez Pueblo's Br. at 35 (citing Pueblo of Jemez v. United States, 790 F.3d at 1164-65 ("[T]he Baca heirs were granted fee title subject to any pre-existing aboriginal occupancy rights of the Jemez Pueblo.")), and that, as a matter of law, the grant contains no language that purports to extinguish aboriginal title, see Jemez Pueblo's Br. at 35 (citing Pueblo of Jemez v. United States, 790 F.3d at 1170 ("[A]boriginal title cannot be extinguished by the grant to a third party of fee title to the land at issue except by clear and unambiguous congressional intent.")). The Tenth Circuit similarly concluded, according to Jemez Pueblo, that the Surveyor General of New Mexico had no authority to extinguish aboriginal title, see Jemez Pueblo's Br. at 35 (citing Pueblo of Jemez v. United States, 790 F.3d at 1163 ("[T]he conclusion of the Surveyor General of New Mexico that the lands at issue were vacant and thus could be transferred to the Baca heirs did not by itself serve to extinguish existing aboriginal title."); id. at 1164 ("It therefore makes no difference that the Surveyor General believed the land selected by the Baca heirs was vacant. He had no authority to extinguish the Jemez Pueblo's aboriginal title.")).

70. Jemez Pueblo argues that, notwithstanding the United States' assertions to the contrary, the Tenth Circuit has already concluded that Jemez Pueblo can succeed in its aboriginal title claim without proving that the Baca heirs and their successors were not actively using the Valles Caldera, see Jemez Pueblo's Br. at 36 (citing Pueblo of Jemez v. United States, 790 F.3d at 1172), because, according to Jemez Pueblo, aboriginal title's exclusivity prong permits non-Indian occupancy and use given that such use differs significantly from Indian occupancy and use for

traditional purposes, see Jemez Pueblo's Br. at 37-38 (citing Pueblo of Jemez v. United States, 790 F.3d at 1165; Pueblo of Jemez v. United States, Oct. 25 MOO at 47, 350 F. Supp. 3d at 1080.

71. Jemez Pueblo asserts that the Court has already rejected the United States' argument that, because Santa Clara Pueblo is an indispensable party, the Court should dismiss Jemez Pueblo's action pursuant to rule 19 of the Federal Rules of Civil Procedure. See Jemez Pueblo's Br. at 38 (citing SJ Order at 6-7). Jemez Pueblo adds that the United States at trial called numerous American Indian witnesses from Pueblos other than Jemez Pueblo, including Santa Clara Pueblo, and thereby affirmed the Court's prediction that "'the United States will robustly defend against Jemez Pueblo's aboriginal title claim, and thereby defend the Pueblo of Santa Clara's interest in the United States' continued stewardship of the Valles Caldera.'" Jemez Pueblo's Br. at 39-40 (quoting SJ Order at 7).

72. Jemez Pueblo asserts that the Court has already rejected the United States' argument that the doctrine of laches bars Jemez Pueblo's Valles Caldera claim, see Jemez Pueblo's Br. at 39-40 (citing SJ Order at 7 ("[B]ecause Congress enacted a statute of limitations in the Quiet Title Act, because Jemez Pueblo brought this action pursuant to the statutory authority granted in the Quiet Title Act, and because Jemez Pueblo did so within the statutorily prescribed limitations period, this Court declines to apply laches to bar Jemez Pueblo's claim to the Valles Caldera.")), and adds that the United States cites no facts which evidence "'longstanding observances and settled expectations' that arose prior to 2000 sufficient to require the Court to revisit the issue," Jemez Pueblo's Br. at 39-40 (quoting United States' Proposed Conclusions ¶ 132, at 32 n.9).

73. Jemez Pueblo argues that, because the Tenth Circuit has already resolved that the Indian canon of construction, which, according to Jemez Pueblo, states that, "'if there is doubt

whether aboriginal title has been validly extinguished by the United States, any doubtful expressions, instead of being resolved in favor of the United States, are to be resolved in favor of the Indians,'" applies to Jemez Pueblo's Valles Caldera claim, the Court should not consider the United States' argument that, because Tribal interests in the Valles Caldera are aligned against Jemez Pueblo, the Court should disregard the canon. Jemez Pueblo's Br. at 40-41 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1162). Jemez Pueblo further argues that Tribal interests are not aligned, because the Tribal witnesses who testified to personal Valles Caldera use lacked official Tribal council resolutions authorizing such witnesses to testify on their respective Tribe's behalf. See Jemez Pueblo's Br. at 41-42. Jemez Pueblo adds that the Court need apply the Indian canon only when ambiguity exists, and that aboriginal title extinguishment is not ambiguous, because the Supreme Court, the Tenth Circuit, and the Court have confirmed that extinguishment cannot occur absent plain and unambiguous Congressional intent. See Jemez Pueblo's Br. at 42-43 (citing Santa Fe, 314 U.S. at 353-54; Pueblo of Jemez v. United States, Oct. 25 MOO at 119 n.39, 350 F. Supp. 3d at 1119 n.39).

74. Jemez Pueblo reminds the Court that the Court has concluded that "'[n]either the 1854 Act [establishing the office of the Surveyor General for New Mexico] nor the Pueblo Lands Act of 1924 include the Valles Caldera among the lands confirmed to belong to Jemez Pueblo,'" and, therefore, according to Jemez Pueblo, the Court cannot construe these acts to affect Jemez Pueblo's aboriginal title claim regardless whether the United States makes assertions to the contrary. Jemez Pueblo's Br. at 43-44 (quoting Pueblo of Jemez v. United States, Oct. 25 MOO at 6, 350 F. Supp. 3d at 1059).

75. Jemez Pueblo argues that the United States ignores the aboriginal title law doctrine which states that "'exclusive' use applies only to '*exclusion of other Indian groups*' and does not include use by non-Indians," Jemez Pueblo's Br. at 44-45 (quoting Jemez Pueblo's Proposed Conclusions ¶¶ 41, at 25-26)(emphasis in Jemez Pueblo's Br.), when the United States instead asserts, according to Jemez Pueblo, "that 'exclusive' applies to all 'adverse claimants' and 'not just adverse *Indians*' and again, asks this Court to adopt irrelevant facts into this incorrect legal standard," Jemez Pueblo's Br. at 45 (quoting United States' Proposed Conclusions ¶ 36, at 7)(emphasis in Jemez Pueblo's Br.). Jemez Pueblo adds that the United States' arguments that low population and land raids preclude a Tribe's ability to establish aboriginal title misinterprets Osage Nation of Indians v. United States, 19 Ind. Cl. Comm. 481 (1968), wherein, according to Jemez Pueblo, the ICC affirms that only successful raids and permanent encroachment can effect title extinguishment, which Jemez Pueblo maintains did not occur within the lands at issue. See Jemez Pueblo's Br. at 45 (citing United States' Proposed Findings ¶¶ 17, 38-39, at 8, 38-39; Osage Nation of Indians v. United States, 19 Ind. Cl. Comm. at 485).

76. Jemez Pueblo argues that the United States' proposed facts which rely on statements made during Tribal consultation meetings and on Anschuetz' analysis are irrelevant, and cannot defeat Jemez Pueblo's exclusivity claim, because such statements and analysis lack specificity, and do not consider dominant, permissive, or joint-use between Jemez Pueblo and other Pueblos and Tribes. See Jemez Pueblo's Br. at 46 (citing United States' Proposed Findings ¶¶ 2, 30, 301-02, 305-06, 309-10, 313, 320, 436, 464, 503, 528, at 1, 11, 78-84, 88, 118, 126, 145-46, 154).

77. Jemez Pueblo asserts that the United States "does little to argue the Spanish extinguished the Pueblo of Jemez's aboriginal Indian title, makes no effort to argue that Mexico did so, and instead primarily argues that extinguishment occurred after 1850 through substantial interference of . . . Jemez's use of the Claim Area by private individuals or other tribes." Jemez Pueblo's Br. at 47 (citing United States' Proposed Findings ¶¶ 57-59, 82-84, 86, 88-118, at 19, 24-32; Kehoe Report at 2-6, 10-17, 21-27, 34-41).

78. Jemez Pueblo argues that the United States misinterprets the legal standard that governs aboriginal title extinguishment when the United States asserts that "*Santa Fe* stands for the proposition that unrecognized aboriginal title can be extinguished *by implication*, based on Executive Branch action and the surrounding circumstances," see Jemez Pueblo's Br. at 47 (quoting United States' Proposed Conclusions ¶ 71, at 16-17), because, according to Jemez Pueblo, the Executive Branch action and surrounding circumstances at issue in Santa Fe, i.e., an Executive Order creating an Indian reservation for the Walapai Tribe, occurred pursuant to the Tribe requesting an Indian reservation, thereby voluntarily relinquishing future land claims, and Jemez Pueblo made no similar request here, see Jemez Pueblo's Br. at 48 (citing Pueblo of Jemez v. United States, 790 F.3d at 1160).

79. Jemez Pueblo argues that the United States ignores the Court's conclusion that private land ownership does not extinguish aboriginal title absent Congressional action when the United States asserts that "interference by the Preserve land's private owners with Plaintiff's alleged aboriginal uses prior to 2000, standing alone, is sufficient to defeat any claim to aboriginal title." Jemez Pueblo's Br. at 49 (quoting United States' Proposed Conclusions ¶¶ 79-80, at 19-20). Jemez Pueblo adds that such an assertion effectively concedes that the United States did not and

cannot prove that the alleged substantial interference is connected to a Congressional act. See Jemez Pueblo's Br. at 50. Moreover, Jemez Pueblo continues, the alleged substantial interference represents mere restrictions that the Valles Caldera's private owners placed on Jemez Pueblo members and that such restrictions did not result in Jemez Pueblo ceasing its traditional Valles Caldera use. See Jemez Pueblo's Br. at 50 (citing United States' Proposed Findings ¶¶ 83-90, 92-94, 96-101, 103, 108-11, 114-16, at 24-31). Jemez Pueblo adds that it rebuts the United States' alleged substantial interference evidence with evidence that such interference did not affect Jemez Pueblo use. See Jemez Pueblo's Br. at 50-52 (citing Jemez Pueblo's Proposed Findings ¶¶ 241, 280, 401-10, at 89, 102, 130-33; United States' Proposed Findings ¶¶ 84-85, 114, 278, 332, at 25, 31, 72-73, 91-92).

80. Jemez Pueblo concedes that the United States created and expanded Jemez Pueblo's trust lands, but contests that such actions extinguished Jemez Pueblo's title to other lands or prevent Jemez Pueblo from bringing future lands claims, because, in such actions, according to Jemez Pueblo, the United States either merely quitclaims its interest in Jemez Pueblo's aboriginal lands or adds lands to the Jemez Reservation that Jemez Pueblo purchased from private owners. See Jemez Pueblo's Br. at 53-55 (citing Jemez Pueblo's Proposed Findings, ¶¶ 113, 115-16 at 48, 49).

81. Jemez Pueblo argues that the United States' citation to the 1860 Baca Grant and to the Surveyor General's underlying findings do not change the law of the case, namely that, absent demonstrable Congressional intent to extinguish Jemez Pueblo's pre-existing aboriginal rights through authorizing non-Indian settlement, "'the grant asserted a title against Europeans only and was considered as blank paper so far as the rights of natives were concerned.'" Jemez Pueblo's Br.

at 56 (quoting Pueblo of Jemez v. United States, Oct. 25 MOO at 77, 350 F. Supp. 3d at 1096 (quoting Worcester v. Georgia, 31 U.S. at 546 (internal quotation marks omitted))).

82. Jemez Pueblo argues that the United States cites no Secretarial Order, Congressionally authorized or otherwise, which imposes use restrictions inconsistent with Jemez Pueblo's historic Valles Caldera use and which could therefore support aboriginal title extinguishment pursuant to the five-factors that, in its Oct. 25 MOO, the Court states that it will consider. See Jemez Pueblo's Br. at 56.

83. Jemez Pueblo argues that the statutes which Congress passed in 2000, 2005, and 2015 do not extinguish Jemez Pueblo's aboriginal title, as the United States asserts, but rather protect Jemez Pueblo's ability to use the Valles Caldera and mandate that Valles Caldera staff consult with Jemez Pueblo regarding the Valles Caldera's management. See Jemez Pueblo's Br. at 56-58 (citing Pueblo of Jemez v. United States, 790 F.3d at 1172; Pueblo of Jemez v. United States, Oct. 25 MOO at 11, 350 F. Supp. 3d at 1062 ("Congress also recognized that 'certain features on the Baca ranch have historical and religious significance to Native Americans,' and Congress explained that those features 'can be preserved and protected through Federal acquisition of the property.'" (quoting 16 U.S.C. § 698v-10))). Jemez Pueblo argues further that the Court should answer in the negative the question whether the 2015 Act extinguished aboriginal Indian title, on which the Tenth Circuit remanded, because, in transferring Valles Caldera management to the National Park Service, the 2015 Act, according to Jemez Pueblo, expressly protects preexisting land rights and traditional Indian use. See Jemez Pueblo's Br. at 58-59 (citing Pueblo of Jemez v. United States, 790 F.3d at 1173 n.21; 128 Stat. 3292 § 3043(b)(13)(C)).

84. Jemez Pueblo argues that the military outpost built in the Valles Caldera, which the United States Army occupied for approximately ten months during 1863 and 1864, did not extinguish its aboriginal title and that Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. 768, 787-88 (1993), on which the United States relies for the proposition that a military encampment can effect extinguishment, is inapposite, because in Uintah Ute Indians of Utah v. United States, the Court of Federal Claims determined, based on undisputed facts, that the Tribe abandoned the subject lands after the military established, officially inaugurated, and expanded a permanent military fort, and here Jemez Pueblo alleges not only that it has never abandoned the Valles Caldera, but also that the outpost was temporary. See Jemez Pueblo's Br. at 59-60 (citing Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. at 787). Jemez Pueblo adds that the outpost deterred Navajo raiding and thereby aided Jemez Pueblo in its Valles Caldera use. See Jemez Pueblo's Br. at 61 (citing Jemez Pueblo's Proposed Findings ¶¶ 640, 643-645, at 202-03).

85. Jemez Pueblo criticizes generally the United States methodology for selecting and presenting its proposed facts:

> [T]he Government adopted a lengthy textual approach with most proposed findings containing a paragraph long statement of multiple facts, followed by a string citation to the record that does not indicate which citation is intended to support which allegation of fact. That process allowed the Government to manipulate and misstate the evidence, and then to use the resulting confusion in a way intended to persuade the Court to adopt "findings" that are contrary to the evidence in the record.

Jemez Pueblo's Br. at 61-62.

86. Jemez Pueblo disputes the United States' assertion that the Santa Clara Restoration Assessment, Santa Fe Nat'l Forest Ethnographic Assessment, and Historic Routes of the Valles Caldera Nat'l Preserve from 1876-1953 support the United States' argument that Santa Clara

Pueblo and other Tribes view the Valles Caldera as a commons. See Jemez Pueblo's Br. at 62-63 (citing United States' Proposed Findings ¶¶ 138, 304, 313, 323, 520, at 37, 79-80, 83-84, 88, 150-51), because the Santa Fe Nat'l Forest Ethnographic Assessment excludes the Valles Caldera entirely, the Santa Clara Restoration Assessment concerns lands outside the Valles Caldera, and Historic Routes of the Valles Caldera Nat'l Preserve from 1876-1953 is merely a study of seventeen historic maps with a particular emphasis on the Baca ranch headquarters, see Jemez Pueblo's Br. at 63.

87. Jemez Pueblo disputes the United States' argument that tree-ring records "in 'the proximity of the Valles Caldera' '*suggest*' other tribal use of the Claim Area," Jemez Pueblo's Br. at 63 (quoting United States' Proposed Findings ¶ 35, at 13)(emphasis in Jemez Pueblo's Br.), because such records originate in a report on wildfire occurrences in the "'Jemez Mountains and other localities in western North America,'" and do not identify any specific Pueblos or Tribes. Jemez Pueblo's Br. at 63 (quoting Anschuetz Report at 42-43).

88. Jemez Pueblo asks the Court to decline the United States' request to find that Tribes had only limited knowledge regarding the Valles Caldera access policies during the Valles Caldera Trust era, because, according to Jemez Pueblo, the United States has not supported this request with evidence from the Trust, and because the Trust consulted with Tribes and Pueblos about the policy, and Tribes and Pueblos commented on the policy. See Jemez Pueblo's Br. at 63 (citing United States' Proposed Findings ¶ 217, at 58-59); Dec. 5 Tr. at 5239:5-12 (Ziehe); Nov. 16 Tr. at 3922:19-25 (deBuys)).

89. Jemez Pueblo asks the Court to decline the United States' request to find that [redacted] see Jemez

Pueblo's Br. at 63-64 (citing United States' Proposed Findings ¶ 367, at 103), because, according to Jemez Pueblo, the only citation to the record to support such a finding is

> (1) a snippet of the testimony given by United States fact witness, Mr. Silva-Banuelos, who at the cited page of the transcript only testified [redacted], and (2) a cite to the report of Dr. Anschuetz, [redacted]

Jemez Pueblo's Br. at 63-64 (citing Anschuetz Report at 90, 161-63).

90. Jemez Pueblo argues that the United States incorrectly asserts that, by "1621, the reduccion process for Plaintiff was complete," when the cited page of the transcript states that the "first phase [of the reduccion process] was completed about 1621," Jemez Pueblo's Br. at 64 (quoting United States' Proposed Findings ¶ 42, at 15; Nov. 14 Tr. at 3380:2-6 (García y Griego)(alterations in Jemez Pueblo's Br.)), and the United States incorrectly identifies Weslowski's map as reflecting a "joint use area," when her report identifies the map as reflecting "Traditional Jemez aboriginal domain," Jemez Pueblo's Br. at 64 (quoting United States' Proposed Findings ¶ 174, at 45; High Altitude Adaptations at 28).

91. Jemez Pueblo argues that numerous United States' proposed facts "rely on a variety of qualifying terms when referencing other tribes," Jemez Pueblo's Br. at 64-65, and that such qualification invites the Court to ignore that, "for aboriginal Indian title claims, 'evidence of use and occupancy of other groups must be specific to defeat a claim of exclusivity,'" Jemez Pueblo's Br. at 64-65 (quoting Native Vill. of Eyak v. Blank, 688 F.3d at 628). For example, Jemez Pueblo asserts that the United States frequently uses the word "likely" to persuade the Court to adopt findings to support its proposition that Tribes other than Jemez Pueblo used the Valles Caldera

before Spanish colonization. Jemez Pueblo's Br. at 65 (citing United States' Proposed Findings ¶ 521, at 151)(asserting that pilgrimages "would likely take Zia across Banco Bonito and Santa Clara across large portions of the Preserve lands"); id. ¶ 414, at 113 ("Zia likely has multiple names for places in the Preserve."); id. ¶556, at 164 ("[I]f these pueblos obtained Cerro del Medio obsidian through trade, they likely got it from non-Jemez pueblos.")). Jemez Pueblo asserts that, at trial, the United States used the word "possible" to elicit answers which seem to suggest that other Tribes have names for and hunt within the Valles Caldera, which, according to Jemez Pueblo, cannot support a judicial finding of actual, specific use despite the United States incorporating such answer into its proposed findings. Jemez Pueblo's Br. at 65-66 (citing Nov. 6 Tr. at 1929:25-1930:3 (Ferguson); id. at 1929:23-1930:3 (Ferguson); id. at 1932:5-9 (Ferguson); id. at 1969:1-3 (Ferguson); id. at 2104:15-18 (Ferguson); United States' Proposed Findings ¶¶ 346-47, 410-16, 427-29, 585, 605, 606, at 96, 112-13, 115-16, 171, 174-75). Jemez Pueblo asserts that the United States also asks the Court to adopt findings that merely "'imply'" that other Tribes use the Valles Caldera. Jemez Pueblo's Br. at 66-67 (citing United States' Proposed Findings ¶ 55, at 18 ("The Navajos almost certainly camped and worshipped in the Preserve lands."); id. ¶ 313, at 83-84 ("Santa Ana used areas surrounding Preserve and, implicitly, much of Preserve."); id. ¶ 411, at 112-13 ("Zia members . . . almost certainly assigned place names to areas within the Preserve"); id. ¶ 412, at 113 (asserting that "Zia might have a name" for Valles Caldera trails); id. ¶ 413, at 113 ("Zia might have names for areas . . . in the Preserve."); id. ¶ 415, at 113 ("Zia might have place names for . . . springs its members use while going on pilgrimages to the Preserve peaks identified by Dr. Ellis.")). Jemez Pueblo argues that the United States uses other qualifiers, "such as 'appear' and 'could,'" when proposing that the Court make findings about other Tribes' specific

Valles Caldera use, which, according to Jemez Pueblo, exaggerates and misstates the record regarding such use. Jemez Pueblo's Br. at 67 (citing United States' Proposed Findings ¶ 36, at 13 ("[A]ll [Pueblo people] appear to have had access to the Jemez Mountains, including the Valles Caldera."); id. at ¶ 54, at 18 ("Since at least 1300, Tewa and Keres Pueblos surrounding the Preserve lands could simply walk or ride up their own paths into the Preserve.")).

92. Jemez Pueblo criticizes Anschuetz' methodology, specifically that Anschuetz bases his entire report on analogy, which, according to Jemez Pueblo, is mere speculation that cannot support any finding of fact. See Jemez Pueblo's Br. at 68 (citing Anschuetz Report at 8).

93. Jemez Pueblo disputes the United States' assertion that Jemez Pueblo and Jemez Pueblo member David Yepa manufactured evidence to support their litigation position, and accuses the United States of "tr[ying] to gin up evidence in its examination of its own fact witness William deBuys to support this personal attack on Mr. Yepa." Jemez Pueblo's Br. at 69 (citing Nov. 16 Tr. at 3856:8-3858:6 (deBuys)). Jemez Pueblo adds that both DeBuys and Steffen refuse to characterize Jemez Pueblo's use of and interest in the Valles Caldera as anything less than genuine. See Jemez Pueblo's Br. at 69 (citing Nov. 13 Tr. at 2980:18-2984:19 (Steffen); id. at 2990:16-2992:13 (Steffen); Nov. 16 Tr. at 3856:8-3858:6 (deBuys)).

94. Jemez Pueblo alleges that the United States provided its expert witnesses with analysis that the United States created for this litigation; for example, the data from Whatley on which Gauthier relies for his rebuttal report to Liebmann, and the geospatial and Euclidian distance analysis on which Anschuetz relies for his rebuttal report to Fogleman, and asserts that such evidence has no independent verification and is therefore insufficient to support findings of fact on these topics. See Jemez Pueblo's Br. at 70.

95. Jemez Pueblo criticizes the United States' reliance on Surveyor William Boone Douglass' article stating that [redacted], because, according to Jemez Pueblo, Douglass was not a trained archeologist or anthropologist, and because his notes are inconsistent with visual depictions, contain hearsay, and were never subject to a peer-review process. See Jemez Pueblo's Br. at 70-71 (citing United States' Proposed Findings ¶¶ 3, 426, 573-82, at 1-2, 115, 168-70). Jemez Pueblo adds that the United States overrelies on Douglass' 1915 map [redacted], because the map, according to Jemez Pueblo, is insufficiently accurate to support Anschuetz' conclusion that [redacted] See Jemez Pueblo's Br. at 70-71 (citing Jemez Pueblo's Proposed Findings ¶¶ 190, 193-96, 199-201, at 75, 76-79).

96. Jemez Pueblo alleges that the United States "advances a stream of inaccurate proposed factual findings that mischaracterize Native Americans as a homogenous group and that misstate individual Pueblo cultures and traditions"; for example, "Anschuetz's 'cosmos' and 'commons' theories that ignore controlling law and scientific thought on the individual land uses of the twenty-one remaining Pueblos," and that Jemez Pueblo "will 'object,' 'dismantle' and 'jeopardize' any shrines that may belong to other tribes." Jemez Pueblo's Br. at 72-73 (citing United States' Proposed Findings ¶¶ 317, 510, 512-13, at 86, 147). Jemez Pueblo also disputes the United States' assertions that Jemez Pueblo does not permit women on Redondo Peak and prohibits its female members from using the Valles Caldera, because, according to Jemez Pueblo, such assertions are "irrelevant . . . inaccurate and improper." Jemez Pueblo's Br. at 73 (citing United States' Proposed Findings ¶¶ 204, 244, 246, 277, 291, 296-97, at 54, 65-66, 72, 75-77;

Jemez Pueblo's Proposed Findings ¶¶ 76-77; 123-24; 171-72, 195, 212, 255, 331, 414, 416, 710, at 32-33, 52, 68-69, 77, 81, 94, 114, 134, 218).

97. Jemez Pueblo argues that the record does not support the United States' assertion that the Tribal council resolutions which support Jemez Pueblo's Valles Caldera claim "have 'little evidentiary value.'" Jemez Pueblo's Br. at 73 (quoting United States' Proposed Findings ¶ 499, at 143; and citing United States' Proposed Findings ¶¶ 498, 501-03, 505-07, at 143, 144-46).

98. Jemez Pueblo criticizes how the United States characterizes its religious culture, and disputes the United States' assertion that Jemez Pueblo has "lost its traditional knowledge," because, according to Jemez Pueblo, the United States' only support for this proposition, which Jemez Pueblo finds offensive, is Greg Kaufman's testimony, which numerous Jemez Pueblo and United States fact and expert witnesses rebutted. Jemez Pueblo's Br. at 74 (quoting United States' Proposed Findings ¶ 226, at 61-62; and citing United States' Proposed Findings ¶ 319, at 88; Jemez Pueblo's Proposed Findings ¶¶ 33-34, 65-66, 67, 71-130, 166-75, 312-19, 327, 355, 398, 414, 424-31, 437-38, 517-18, 525, at 10-11, 27-55, 66-70, 109-11, 113, 119, 130, 134, 136-38, 139-40, 166-56).

99. Jemez Pueblo asks the Court to reject the United States' argument that, because American Indians consider certain landmarks sacred, this belief constitutes actual and specific use, because, according to Jemez Pueblo, a location's sacred nature is per se insufficient to establish actual use and occupancy absent corroboration through additional use evidence given that multiple Tribes can hold an area sacred without impeding an individual Tribe's aboriginal title. See Jemez Pueblo's Br. at 74-75 (citing United States' Proposed Findings ¶¶ 186, 301, 303, 447, at 48, 78, 79, 120). Jemez Pueblo adds that the United States "similarly works to manipulate general Pueblo

opposition to the geothermal project proposed in the Claim Area in the 1980s to support its theory that sacred areas demonstrate actual and specific use." Jemez Pueblo's Br. at 76 (citing United States' Proposed Findings ¶¶ 143-49, at 38-39).

100. Jemez Pueblo disputes the United States' assertion that members from the Pueblos of Cochiti, Santa Clara, San Felipe, and Tesuque once indicated that they use the area proposed for the Valles Caldera geothermal development project, because, according to Jemez Pueblo, Santa Clara Pueblo representatives discussed specific use only of Santa Clara Creek and its watershed and Cochiti Pueblo's representative discussed only shrines in the Jemez Mountains generally and did not present specific use evidence. See Jemez Pueblo's Br. at 76-77 (United States' Proposed Findings ¶¶ 165-67, at 43).

101. Jemez Pueblo asks the Court to reject the United States' Proposed Findings based on statements made during Tribal consultation meetings, because, according to Jemez Pueblo, many such statements are too general to support actual Valles Caldera use, and because several Tribes that the United States invited to its consultation meetings did not use the Valles Caldera when the Spanish arrived to the Jemez Mountains or thereafter, and do not have a genuine interest in the Valles Caldera. See Jemez Pueblo's Br. at 77-79 (United States' Proposed Findings at ¶ 437, at 118).

102. Jemez Pueblo argues further its position that the United States' Proposed Findings "fail to distinguish between evidence of other tribes using the Jemez Mountains in general and evidence of other tribes specifically using the Claim Area," and directs the Court to several proposed findings which improperly suggest, according to Jemez Pueblo, that general Jemez Mountain use and use occurring near the Valles Caldera indicates that such uses also occurred

within the Valles Caldera. Jemez Pueblo's Br. at 79-80 (citing United States' Proposed Findings ¶¶ 2, 4, 6, 7, 9, 10, 11, 12, 32, 35, 303, 461, at 1-6, 12-13, 79).

103. Jemez Pueblo argues that the United States' Proposed Findings mischaracterize and cherry pick the testimony that Jemez Pueblo member witnesses, such as Gachupin, Chinana, and Correo, provide, and thereby minimize, according to Jemez Pueblo, Jemez Pueblo's Valles Caldera use during the twentieth century, and exaggerate the effect that twentieth-century restrictions had on Tribal access for grazing, hunting, and other activities, most of which the record shows that Jemez Pueblo ignored. See Jemez Pueblo's Br. at 81-85 (citing United States' Proposed Findings ¶¶ 220, 221, 223, 226, 227, 238, 241, 246, 250, at 59-62, 64-67; Jemez Pueblo's Proposed Findings ¶¶ 71-130, 185-86, 401, 411-414, 415-42, at 30-55, 73-74, 130-141).

104. Jemez Pueblo disputes the United States' assertion that Jemez Pueblo prohibits [redacted] See Jemez Pueblo's Br. at 85-86 (citing Nov. 1 Tr. at 937:6-938:6 (Loretto); United States' Proposed Findings ¶ 244, at 65; Designation of Deposition Testimony -- Joseph Toya at 113:13-19 (J. Toya)).

105. Jemez Pueblo argues that the United States' Proposed Findings mischaracterize and diminish Jemez Pueblo [redacted] See Jemez Pueblo's Br. at 86-88 (citing Nov. 1 Tr. at 1007:12-1008:7 (Loretto); id. at 1021:13-1022:12 (Loretto); United States' Proposed

Findings ¶¶ 248, 254, 256, 259, 271, 274, at 66, 68-69, 71-72); Jemez Pueblo's Proposed Findings ¶¶ 39-42, 170-72, at 13-15, 68-69).

106. Jemez Pueblo cautions the Court to approach Ellis' work with skepticism, because, according to Jemez Pueblo, her work is often flawed, inaccurate, outdated, recycled from other projects, unsourced, and unreviewed in scholarly publications. See Jemez Pueblo's Br. at 88-89 (citing Oct. 30 Tr. at 512:9-17 (Liebmann); Nov. 19 Tr. at 4149:23-4151:15 (Kehoe); Dec. 3 Tr. at 4951-4952:9-25 (Anschuetz)). For example, Jemez Pueblo asserts that Liebmann's fieldwork contradicts Ellis' opinion that the Pueblos of Jemez, Santa Ana, and Zia jointly used several sites claimed in their ICC litigation, and proves that Jemez Pueblo used those sites exclusively. See Jemez Pueblo's Br. at 89 (citing Oct. 30 Tr. at 512:18-513:18 (Liebmann)). Jemez Pueblo adds that the United States mischaracterizes Ellis' assertions regarding other Tribes' Valles Caldera use, specifically the Navajo Nation, which Klara Kelley's more recent work discredits, and those made to support the Pueblos' opposition to the Valles Caldera geothermal development project. See Jemez Pueblo's Br. at 89-90 (citing Nov. 6 Tr. at 1964:11-1965:1 (Liebmann); Nov. 19 Tr. at 4092:2-4094:5 (Kehoe); United States' Proposed Findings ¶¶ 3, 55, 68, 149, 151, 153, 175, 359, 580, at 1, 18, 21, 39-41, 99, 169; Liebmann et. al. Rebuttal Reports at 16-17). Furthermore, Zia Pueblo is hostile to Ellis' work, according to Jemez Pueblo. See Jemez Pueblo's Br. at 91 (citing Dec. 3 Tr. at 4951:9-4952:25 (Anschuetz)).

107. Jemez Pueblo argues that the United States admits that Jemez Pueblo possessed aboriginal title to the Valles Caldera when the United States, according to Jemez Pueblo, mischaracterizes García y Griego's testimony to support the United States' conclusion that "Jemez Pueblo was 'dispossessed' of its interest in the Claim Area by the Spanish." Jemez Pueblo's Br.

at 91-92 (quoting United States' Proposed Findings ¶ 40, at 14, and citing United States' Proposed Findings ¶¶ 24, 56, 64, 234, 469, 476, 479, 532, 534, 560-61, 568, at 10, 18, 20, 64, 130-32, 155-56, 165, 167; Jemez Pueblo's Proposed Findings ¶¶ 170, 172-73, 176, 244, 259, 286-320, 350-65, 398-413, 416-31, 434, 437-39, 441-57, 503-07, 524-25, 527, 652-61, 697-710, at 68, 70, 90-91, 96, 103-11, 118-21, 130-43, 151-58, 204-06, 215-18). Jemez Pueblo argues that the United States further mischaracterizes García y Griego's testimony when it asserts that there is no evidence that Jemez Pueblo used the Valles Caldera before the twentieth century. See Jemez Pueblo's Br. at 92-93 (citing Jemez Pueblo's Proposed Findings ¶¶ 16-18, 286, 290-93, 300-05, 308-09, 389, at 3, 103-08, 128). Jemez Pueblo argues that García y Griego's reliance on inference is sound, despite the United States' attempts to discredit this method, and distinguishes García y Griego's reliance on inference to support his conclusion that Jemez Pueblo continued to use the Valles Caldera after Spanish arrival from Anschuetz' mere speculation that other Tribes used the Valles Caldera based on geographic proximity. See Jemez Pueblo's Br. at 93-94 (citing United States' Proposed Conclusions ¶ 40, at 8; Jemez Pueblo's Proposed Findings ¶¶ 16-18, 286, 290-93, 300-05, 308-09, at 3, 103-08, 128).

108. Jemez Pueblo describes Ferguson's methodology, wherein Ferguson -- to support his expert report and testimony -- collected over many years Jemez Pueblo members' traditional stories, and compared them to academic scholarship and other ethnographers' reports, and argues that, given the United States' concession that Ferguson's expert report comprehensively examines Jemez Pueblo's relationship with the Valles Caldera, the United States' proposed finding that Ferguson did not consider any other Tribes' Valles Caldera uses is both unconvincing and

inaccurate. See Jemez Pueblo's Br. at 94-97 (citing Nov. 6 Tr 1894:23-1895:4 (Ferguson); United States' Proposed Findings ¶¶ 588, 590, at 171-72; Anschuetz Rebuttal Report at 39).

109. Jemez Pueblo criticizes Anschuetz for not interviewing more Tribal members, for focusing on the Jemez Mountains and not on the Valles Caldera, for analogizing and extending his work with Acoma Pueblo to other Pueblos and Tribes, and for speculating and theorizing as to other Tribes' Valles Caldera use absent direct evidence. See Jemez Pueblo's Br. at 97-98 (citing United States' Proposed Findings ¶¶ 6, 8, 9, 11, 12, 13, 35, 36, 54, 302, 309-10, 364, 379-82, 417, 424, 426, 521, at 3-7, 13, 18, 78-83, 101-06, 113-15, 151; Jemez Pueblo's Proposed Findings ¶¶ 22-39, 41, at 6-14).

110. Jemez Pueblo asserts as irrelevant the United States' arguments that, when conducting his geospatial analysis, Fogleman did not incorporate the impact of land cover, measured only the distance to Redondo Peak, and failed to take into account populations of other non-Jemez ancestral Pueblos, because, according to Jemez Pueblo, Fogleman was analyzing the comparative or relative movement from one place to another, of which land cover and population make only a slight difference. See Jemez Pueblo's Br. at 98-99 (citing United States' Proposed Findings ¶¶ 524, 526, 527, at 152, 153). Jemez Pueblo adds that Anschuetz' attempts to refute Fogleman's analysis are unpersuasive, because, according to Jemez Pueblo, "U.S. contractors for the Department of Justice . . . provided technical assistance to Dr. Anschuetz, who is not a GIS expert, does not have any technical knowledge of ArcGIS software, and did not perform the Euclidean distance analysis, all of which Mr. Fogleman did." Jemez Pueblo's Br. at 99 (citing Nov. 30 Tr. at 4739:2-15 (Anschuetz); id. at 4816:25-4818:25 (Anschuetz); Jemez Pueblo's Proposed Findings ¶¶ 23-25, at 6-7).

111. Jemez Pueblo criticizes Gauthier for lacking "significant archeological credentials," for being "unable to identify Jemez ceramic assemblages after 1680," and for using a flawed methodology that ignores thousands of sherds found within the Valles Caldera, and argues that the Court cannot use Gauthier's "compromised data" to discredit Liebmann's conclusion that Jemez Pueblo's ceramic use dominates ceramics from other Tribes or ethnic groups in the Valles Caldera. Jemez Pueblo's Br. at 99-100 (citing United States' Proposed Findings ¶¶ 15-25, 535-36, 538, 540, at 7-10, 156-58; Jemez Pueblo's Proposed Findings ¶¶ 45-47, 50-51, 487-502, at 16-20, 147-50).

112. Jemez Pueblo criticizes Steffen's report and testimony for not attempting to analyze which Tribes used the obsidian found in the Valles Caldera, for not attempting to analyze possible dominate use, and for concerning herself with an area far broader than the period relevant in this litigation, and argues that Liebmann's conclusion that Jemez Pueblo dominated the Cerro del Medio obsidian quarry from the 1300s to approximately 1700 is better than Steffen's report and testimony, because Liebmann limited his analysis to both Jemez Pueblo and non-Jemez Pueblo sites within and proximate to the Valles Caldera. See Jemez Pueblo's Br. at 101-03 (citing United States' Proposed Findings ¶¶ 543, 544, 546, 548, 549, 551, 552, 558, at 159-65; Jemez Pueblo's Proposed Findings ¶¶ 302-04, 503-07, at 106-07, 507-08). Jemez Pueblo adds that the United States, in an attempt to discredit Liebmann's work, asks the Court to confuse Liebmann's article in American Antiquity, which Liebmann wrote, according to Jemez Pueblo, merely to show Jemez Pueblo obsidian use in the Valles Caldera, with his expert report specifically for this case, wherein Liebmann compares various Tribes' Valles Caldera obsidian use. See Jemez Pueblo's Br. at 103-

05 (citing United States' Proposed Findings ¶ 557, at 164; Jemez Pueblo's Proposed Findings ¶¶ 302-304, at 106-07).

113. Jemez Pueblo argues that, contrary to the United States' characterization, Liebmann's and Kulisheck's opinions do not conflict, because Liebmann acknowledged at trial that he used Kulisheck's 2005 article as a basis for his own opinions, and because Liebmann comprehensively studied 100 Banco Bonito fieldhouses whereas Kulisheck studied only thirty select sites. See Jemez Pueblo's Br. at 105 (citing Oct. 30 Tr. at 566:1-9 (Liebmann); Liebmann Report at 15). Jemez Pueblo disputes the United States' contention that Liebmann excluded evidence regarding historic, non-Jemez Pueblo Banco Bonito use, because, according to Jemez Pueblo, such evidence does not exist. See Jemez Pueblo's Br. at 105-06 (citing United States' Proposed Findings ¶¶ 570-71, at 168; Liebmann Report at 15). Jemez Pueblo adds that the United States' attempt to question Jemez Pueblo's continuous Banco Bonito use is contrary to controlling law, because "actual and continuous use" under the legal standard means "actual and continuous use" as ancestral Jemez Pueblo members traditionally would have used the land, which necessarily must account for seasonal and intermittent use, according to Jemez Pueblo. Jemez Pueblo's Br. at 106 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1166; and citing United States' Proposed Findings ¶ 569, at 167-68; Jemez Pueblo's Proposed Conclusions ¶ 37, at 22).

114. Jemez Pueblo argues that the United States' suggestion that the various Tribal council resolutions supporting Jemez Pueblo's Valles Caldera claim do not reflect each respective Tribe's true sentiments is unpersuasive, because, according to Jemez Pueblo, Tribal councils are legislative bodies responsible for setting policy and issuing official position statements entitled to belief, and because the nuances in language among the Tribal council resolutions reflects the

deliberative process in which individual Tribal councils engaged while legislating. See Jemez Pueblo's Br. at 106-08 (citing United States' Proposed Findings ¶ 502, at 144-45). Jemez Pueblo adds that the Court should similarly credit the All Indian Pueblo Council's, Southern Pueblos Council's, and the All Pueblo Council of Governors' resolutions that support Jemez Pueblo's aboriginal title claim. See Jemez Pueblo's Br. at 108-110 (citing United States' Proposed Findings ¶¶ 493, 496, at 141-42; Jemez Pueblo's Proposed Findings ¶¶ 581, 582, 584, at 179-82).

115. Jemez Pueblo argues that the United States' references to statements that San Ildefonso members made during the Valles Caldera geothermal development project litigation, the deliberations surrounding the United State's Valles Caldera acquisition, and San Ildefonso's ICC claim, are insufficient to defeat Jemez Pueblo's aboriginal title claim, especially when weighed against Tribal council resolutions, because such statements express general interest and not specific use. See Jemez Pueblo's Br. at 110-11 (citing United States' Proposed Findings ¶¶ 3, 9, 11, 136, 186, 189, 193-95, 214, 216, 305, 308, 439-71, 495, 503, at 1, 4-5, 35-36, 48-51, 57-58, 80-82, 118-31, 142, 145; Jemez Pueblo's Proposed Findings ¶¶ 545-53, 556-96, at 163-85). Jemez Pueblo argues further that any actual San Ildefonso activity within the Valles Caldera, such as the alleged eagle-hunting incident and [redacted], is consistent with Jemez Pueblo's dominant use and other Tribes' joint or permissive use for traditional purposes, which, according to Jemez Pueblo, San Ildefonso and many other Pueblos and Tribes recognize. See Jemez Pueblo's Br. at 110-11 (citing United States' Proposed Findings ¶¶ 282, 443, 495, 503, at 74, 119, 142, 145; Jemez Pueblo's Proposed Findings ¶¶ 545-53, 556-96, at 163-85).

116. Jemez Pueblo argues that the United States' reliance on Shackley for the proposition that, because archeologists found Cerro del Medio obsidian at ancestral San Ildefonso

sites, San Ildefonso used the Valles Caldera, is misplaced, because, according to Jemez Pueblo, Shackley's analysis does not focus on the relevant time period in this litigation, and the United States ignores that Anschuetz directed Shackley to write the article which includes the statements regarding San Ildefonso's Valles Caldera use. See Jemez Pueblo's Br. at 111 (citing Oct. 31 Tr. at 629:7-22 (Liebmann); Jemez Pueblo's Proposed Findings ¶¶ 156-57, at 63-64). Jemez Pueblo adds that Liebmann was unable to tell why Shackley identified San Ildefonso Pueblo as the obsidian's ancestral owner, because "when you have multiple modern day pueblos in a given ethnolinguistic group, it can be difficult to say whether a site is affiliated with one of those modern pueblos or another. So that's why we just talked about ancestral Tewa, rather than San Ildefonso specifically." Jemez Pueblo's Br. at 111 (quoting Oct. 31 Tr. at 629:7-22 (Liebmann)).

117. Jemez Pueblo argues that the United States "confuses factual issues in this action when it uses the term 'Jemez Province' to define what should be described as the 'Jemez ancestral domain,'" because, according to Jemez Pueblo, "Jemez Province" is a term that archaeologist Michael Elliot used in the 1980s to describe the specific area that Jemez Pueblo's architectural structures and occupation encompass, whereas "'Jemez ancestral domain' is a far greater territory that includes all historic Jemez use and occupation areas." Jemez Pueblo's Br. at 112 (citing United States' Proposed Findings ¶¶ 9, 476, 481, 527, 567, 576, at 4, 134-36, 153, 167, 169; Jemez Pueblo's Proposed Findings ¶¶ 55, 119, 328, 338, 586, at 22, 50-51, 113, 116, 183-84). Jemez Pueblo adds that, although "Elliott's work strongly supports Jemez Pueblo use by detailing Jemez occupation of the Claim Area, which Dr. Liebmann acknowledges," it is nonetheless inappropriate to interchange two specific terms when such terms have separate meanings. Jemez Pueblo's Br. at 112 (citing United States' Proposed Findings ¶ 476, at 134-35).

118. Jemez Pueblo repeats its argument that, absent a clear and unambiguous act of Congress to extinguish Jemez Pueblo's aboriginal title to the Valles Caldera, "it simply does not matter how much the United States paid for the Baca fee title, for a fee interest in minerals, or the managing costs of and restoring the Claim Area." Jemez Pueblo's Br. at 112-13 (citing United States' Proposed Findings ¶¶ 206-08, at 79-80). Jemez Pueblo similarly argues that the United States' assertion that Jemez Pueblo "would require federal assistance to 'maintain' the Claim Area . . . not only is irrelevant, but ignores the fact that one man -- Patrick Dunigan -- did quite well managing the Claim Area on his own, and the Government provides no reason the Pueblo of Jemez could not do the same." Jemez Pueblo's Br. at 113 (quoting United States' Proposed Findings ¶¶ 209, 622, at 55-56, 180). Jemez Pueblo concludes by asserting that "policy arguments cannot overcome binding precedent which confirms that congressional action is required before any extinguishment of aboriginal title can occur." Jemez Pueblo's Br. at 113 (citing Pueblo of Jemez v. United States, Oct. 25 MOO at 119, 350 F. Supp. 3d at 1119; Coopers & Lybrand v. Livesay, 437 U.S. 463, 470 (1978); Schneberger v. Air Evac Ems, Inc., 749 F. App'x 670, 675 (10th Cir. 2018); United States v. Lenon, 737 F. App'x 519, 520 (11th Cir. 2018); LI Neuroscience Specialists v. Blue Cross Blue Shield of Fla., 361 F. Supp. 3d 348, 355-56 (E.D.N.Y. 2019)(Bianco, J.)("[E]ven assuming *arguendo* that such public policy arguments were persuasive (an issue which this Court does not reach), such considerations are irrelevant when binding precedent is controlling.").

12. The United States' Post Trial Brief.

119. In its post-trial brief, the United States first argues that Jemez Pueblo cannot prove that it ever held aboriginal title to the Valles Caldera, because the trial establishes that at least

fifteen Pueblos and Tribes used those lands in a non-exclusive manner throughout the past 800 years. See United States' Post Trial Brief at 3, filed May 6, 2019 (Doc. 390)("United States' Br."). The United States adds that Jemez Pueblo's admissions that other Tribes used the Valles Caldera are fatal to its assertion that it is and has been the Valles Caldera's exclusive user. See United States' Br. at 3-4 (citing Jemez Pueblo's Proposed Findings ¶ 286, at 103).

120. The United States argues that the trial confirms that Keres and Tewa Pueblos occupied the Jemez Mountains' eastern slopes, including the major drainages that served as paths into the Valles Caldera, and that, since 1250 CE, these Pueblos accessed the Valles Caldara to hunt, gather plants, collect obsidian, and conduct other traditional practices. See United States' Br. at 4-5 (citing United States' Proposed Findings ¶¶ 5-13, 520, 525, at 1-2, 156-58).

121. The United States argues that, in the 1800s, the Jicarilla Apache Nation lived closest to and could easily access the Valles Caldera, and that, according to the United States, a Jemez Pueblo expert witness admitted that the Jicarilla Apache turned the Valles Caldera into a dangerous place for Jemez Pueblo and thereby decreased Jemez Pueblo's access to Cerro del Medio obsidian. See United States' Br. at 5 (citing United States' Proposed Findings ¶¶ 51, 548-49, at 20, 165).

122. The United States argues that Navajo Nation members have lived near the Valles Caldera more recently than Jemez Pueblo members and that Kelley refutes Jemez Pueblo's suggestion that Navajo Nation members used the Valles Caldera only for raiding when she asserts that multiple Navajo Nation origin stories mention the Valle Grande. See United States' Br. at 6 (citing United States' Proposed Findings ¶¶ 445-47, 571, 639, at 141, 172, 201-02).

123. The United States argues that the two ancestral Santa Clara Pueblo villages totaling approximately 3,200 rooms located within a few miles of the Valles Caldera, the border

that Santa Clara Pueblo shares with the Valles Caldera, and the easement imposing Valles Caldera land use restrictions in Santa Clara Pueblo's favor all evidence that Santa Clara Pueblo accessed and used the Valles Caldera for centuries before the United States purchased the land. See United States' Br. at 6 (citing United States' Proposed Findings ¶¶ 12, 135, 322-25, 330, 520, at 2, 56, 111-12, 114, 156).

124. The United States argues that the trial also establishes that most modern Pueblos maintain strong spiritual connections with the Valles Caldera and that such connections have compelled these Pueblos to engage in cultural activities, including worshipping at Redondo Peak, since at least 1250 C.E. See United States' Br. at 7 (citing United States' Proposed Findings ¶¶ 1-8, 10, at 1-2).

125. The United States argues that the Valles Caldera pottery record suggests that Pueblos other than Jemez Pueblo dominated the Valles Caldera between 1250 and 1750 CE, because archeological sites that archeologists affiliate with ancestral Tewa and Keres populations are the most common sites in the southeast and south central areas of the Valles Caldera, which, according to the United States, are the areas closest to the Keres and Tewa villages, and ceramics also demonstrate that ancestral Tewa and Keres used the northern portions. See United States' Br. at 7-8 (citing United States' Proposed Findings ¶¶ 22-24, 539, at 6-7, 161). The United States adds that, although the trial establishes that archeologists associate most Banco Bonito sites with Jemez Pueblo's ancestors, Tewa and Keres pottery dominates the areas outside the Banco Bonito. See United States' Br. at 7-8 (citing United States' Proposed Findings ¶¶ 532-34, at 160-61).

126. The United States argues that the ceramics evidence excavated from [redacted] in the Valles Caldera's southern portion illustrates that, before the Pueblo Revolt, Tewa-affiliated

Tribes used the [redacted] site more than Jemez Pueblo. See United States' Br. at 7-8 (citing United States' Proposed Findings ¶¶ 22-25, 329, 350, 536, 540, 542, at 6-7, 113, 118, 162). The United States adds that Liebmann's analysis shows at most that Jemez Pueblo's ancestors farmed less than one percent of the Valles Caldera's southwest corner centuries before the Spanish forced Jemez Pueblo to move twenty miles south to Walatowa, which, according to the United States, is insufficient evidence to establish that Jemez Pueblo ever dominated the Valles Caldera, or even the small portion that Jemez Pueblo farmed, given that other Tribes used and traversed this area as well. See United States' Br. at 10-11 (citing United States' Proposed Findings ¶¶ 42, 234, 363, 367, 369, 379, 381, 385, 388, 391, 423, 521, 560-63, 569, 570, at 15, 88, 121-29, 136, 156, 168, 170-71).

127. The United States argues that the trial establishes that many American Indian peoples collected and used obsidian from the Jemez Mountains, including the Cerro del Medio source entirely inside the Valles Caldera and the Cerro Toledo source located partially within the Valles Caldera, from before 10,000 B.C.E to at least 1900 C.E., and that the simplest explanation for the obsidian's widespread distribution is that many people "just came in and got it," or, alternatively, traded with Keres and Tewa Pueblos before the Pueblo Revolt. United States' Br. at 12 (citing United States' Proposed Findings ¶¶ 26-32, 547, 551, 552-57, at 7-10, 164-67). The United States adds that Liebmann ignored evidence, including his own article, which suggests that other Tribes used Cerro del Medio obsidian to a degree greater than Jemez Pueblo. See United States' Br. at 13 (citing United States' Proposed Findings ¶¶ 543-59, at 162-67).

128. The United States argues that tree-ring records suggest that no single Pueblo or Tribe controlled lands near the Valles Caldera, and that carvings on the Valles Caldera's aspens

suggest that individuals associated with numerous non-Jemez communities, including six other Pueblos, used the Valles Caldera between the 1890s and the 1980s. See United States' Br. at 14 (citing United States' Proposed Findings ¶¶ 35-38, at 11-13).

129. The United States argues that Jemez Pueblo's decision to jointly prosecute its ICC takings claims with the Santa Ana Pueblo and Zia Pueblo is fatal to its current claim, because the three Pueblos presented before the ICC evidence that they used a portion of the Valles Caldera in common, that Santa Clara Pueblo and San Ildefonso Pueblo used a portion of the Valles Caldera, including Redondo Peak, in a manner that would defeat the Pueblos of Jemez, Santa Ana, and Zia's exclusive use claim, and that Jemez Pueblo viewed Redondo Peak as its joint territory's boundary, which indicates Jemez Pueblo's belief that most of the Valles Caldera is within other Pueblos' territory. See United States' Br. at 14-16 (citing United States' Proposed Findings ¶¶ 35-38, at 11-13). The United States adds that former Jemez Pueblo governor Pat Toya testified before the ICC that the Pueblos of Jemez, Santa Ana, and Zia jointly use Redondo Peak, and other portions of the Valles Caldera, which standing alone defeats Jemez Pueblo's aboriginal title claim. See United States' Br. at 16-17 (citing United States' Proposed Findings ¶¶ 124-30, 465-66, at 52-55, 144-45).

130. The United States argues that, before the ICC, Zia Pueblo witness Juanito Medina did not testify that Zia Pueblo uses the Valles Caldera subject to Jemez Pueblo's aboriginal title, but instead presented testimony which states that, although Zia Pueblo uses [redacted] Medina is unsure whether Jemez Pueblo also uses it. See United States' Br. at 17 (citing United States' Proposed Findings ¶¶ 131-33, at 55). The United States adds that Ellis submitted a map to the ICC which establishes that both Jemez Pueblo and Zia Pueblo [redacted]

[redacted] which, according to the United States, indicates that both Tribes have similar religious interests in that mountain. See United States' Br. at 17 (citing United States' Proposed Findings ¶¶ 132-33, at 34-35).

131. The United States argues that the Jicarilla Apache Nation alleged in 1958 that it had exclusive aboriginal title to the entire Valles Caldera and presented to the ICC evidence that it used the entire Valles Caldera, with its territory ranging as far south as Jemez Springs. See United States' Br. at 18 (citing United States' Proposed Findings ¶¶ 137-39, at 36-37). The United States adds that the Jicarilla Apache Nation reached a stipulation with the Pueblos of Santa Clara, Santo Domingo, San Ildefonso, Nambe, and Taos, and thereafter reduced its ICC claim to encompass the majority -- but not the entirety -- of the Valles Caldera. See United States' Br. at 18 (citing United States' Proposed Findings ¶¶ 137-39, at 36-37).

132. The United States argues that, although imprecise, San Ildefonso's ICC claim places the western boundary of San Ildefonso's exclusive territory at "the Baca Location and the Valle Grande," included the Valles Caldera's southeast portion, and considered the Cerro del Medio obsidian source on the Valle Grande's north side as either exclusive territory or common territory. United States' Br. at 18 (quoting United States' Proposed Findings ¶ 136, at 35-36; and citing United States' Proposed Findings ¶¶ 189, 193-95, 443, at 49-51, 119).

133. The United States argues that Santa Clara Pueblo's ICC claim extended into the northeastern part of Baca Location No. 1, and that Santa Clara Pueblo members testified that they ranged beyond Santa Clara Creek's headwaters to graze, hunt, and conduct religious activities. See United States' Br. at 18 (quoting United States' Proposed Findings ¶ 135, at 35).

134. The United States argues that, in jointly opposing the Valles Caldera geothermal development project located on Redondo Mountain's western and northern slopes, eighteen Pueblos conveyed in 1981 that they each had historical ties to the Valles Caldera that many Pueblos continued to exercise, particularly in the Redondo Peak area, which, according to the United States, undermines Jemez Pueblo's assertion that it has aboriginal title to any portion of the Valles Caldera. See United States' Br. at 19-20 (citing United States' Proposed Findings ¶¶ 3, 142-87, 303, 332, 309, 332, 352, 368, 370, 435, at 1-2, 38-49, 79, 91-92, 97, 103-04, 117). The United States adds that Weslowski's work to support the Pueblos' opposition to the geothermal development project establishes that, as of 1981, Jemez Pueblo believed that it used less than the entire Valles Caldera, that such use occurred jointly with Santa Ana Pueblo and Zia Pueblo, and that at least nine federally recognized Tribes also used the Valles Caldera. See United States' Br. at 20-21 (citing United States' Proposed Findings ¶¶ 172-74, 468, at 45, 129). Moreover, according to the United States, the eighteen Pueblos drafted reports and documents for litigation, several of which Ellis authored, that detailed Santa Clara Pueblo's, Jemez Pueblo's, and Zia Pueblo's extensive Valles Caldera use and connections. See United States' Br. at 21-22 (citing United States' Proposed Findings ¶¶ 145-55, 178-80, 303-04, 310, 328, 332-33, 335, 359, 363-67, 379-409, at 39-41, 46-47, 79-80, 82-83, 89-93, 101-03, 105-12).

135. The United States argues that Zia Pueblo's Valles Caldera use for traditional and religious purposes extends from time immemorial to the present, which, according to the United States, Ellis' work confirms and which, at least as to Zia Pueblo's reverence for and use of multiple Valles Caldera peaks, including Redondo Peak, Ferguson does not dispute. See United States' Br. at 23 (citing United States' Proposed Findings ¶¶ 308, 359-426, at 82, 99-115). The United States

adds that [redacted]." United States' Br. at 23 (citing United States' Proposed Findings ¶ 383, at 106).

136. The United States disputes Jemez Pueblo's assertion that Santa Clara's interests in the Valles Caldera are limited to the Valles Caldera's northeast portion, and argues instead that Santa Clara Pueblo has firmly rooted cultural and religious sites throughout the Valles Caldera, including Cerro la Jara, the Valles Caldera's main north-south artery, the Valles Caldera's main entrance, all high points throughout the Valles Caldera, and the area west of Redondo Peak. See United States' Br. at 23 (citing Jemez Pueblo's Proposed Findings ¶¶ 22, 144-49, 153-55, 162, 164-68, 329, 347-49, 353, 356, at 9-10, 38-44, 90, 96-97). The United States adds that Santa Clara Pueblo has historically used multiple spots throughout the Valles Caldera for societal harvesting, collecting medicinal plants, gathering obsidian, grazing, and quarrying piki stones, and that Santa Clara Pueblo has worshipped since time immemorial at [redacted]. See United States' Br. at 24 (citing United States' Proposed Findings ¶¶ 3, 128-29, 135, 144-49, 159, 166-73, 175-80, 182-84, 189, 303, 308, 310, 313, 329-32, 335-37, 341-45, 351-56, 373, 465, 580, at 1-2, 34-35, 38-40, 42-50, 79-84, 90-99, 104, 126, 169).

137. The United States argues that San Ildefonso used the Valles Caldera in a manner that defeats Jemez Pueblo's exclusivity arguments; for example, according to the United States, San Ildefonso Pueblo asserted before the ICC that its exclusive aboriginal territory was Baca Location No. 1 and the Valle Grande, and asserted before Congress that, aside from the exclusive territory that San Ildefonso claims, no single Pueblo can claim the Valles Caldera. See United States' Br. at 24 (citing United States' Proposed Findings ¶¶ 3, 9, 33, 64, 128-29, 136-39, 186,

189, 193-95, 282, 305, 308, 373, 439-41, 443, 453, 456, 552, at 1-2, 4-5, 12-13, 20, 34, 36-37, 48-49, 50-51, 74, 80-82, 104, 118-19, 123-24, 162). The United States adds that San Ildefonso Pueblo grazed livestock, hunted game, procured minerals and worshipped on Redondo Peak both before and during the twentieth century. See United States' Br. at 25 (citing United States' Proposed Findings ¶¶ 194, 282, at 51, 74).

138. The United States argues that, regardless Suina's difficulty defining Cochiti Pueblo's ancestral domain and borders, [redacted], and believes that its aboriginal lands include a small portion of the Valles Caldera's southeast corner, which Whatley considers a Cochiti Pueblo use area. See United States' Br. at 25 (citing United States' Proposed Findings ¶¶ 427-30, 432, 435, 475, at 115-18, 133-34). [redacted] See United States' Br. at 25 (citing United States' Proposed Findings ¶¶ 3, 573-82, at 1-2, 168-70).

139. The United States argues that Santa Ana Pueblo used the Valles Caldera, which, according to the United States, Jemez Pueblo governor Toya confirmed before the ICC and Weslowski confirmed through her work in opposition to the Valles Caldera geothermal development project. See United States' Br. at 26 (citing United States' Proposed Findings ¶¶ 427-29, 430, 432, 435, 475, at 115-18, 133). Moreover, according to the United States, Santa Ana Pueblo disclosed its continuing relationship with the Valles Caldera in recent discussions with Valles Caldera staff regarding natural resources, restoration, and stewardship issues. See United

States' Br. at 26 (citing United States' Proposed Findings ¶¶ 427-29, 430, 432, 435, 448, 475, at 115-18, 120-21, 133).

140. The United States argues that many Pueblos also demonstrate their cultural ties to the Valles Caldera by consulting, or otherwise engaging in government-to-government meetings, with the Federal agencies that manage the Valles Caldera. See United States' Br. at 26 (citing United States' Proposed Findings ¶¶ 436-38, at 118). The United States adds that the Jicarilla Apache, the Navajo Nation, and the Pueblos of Santa Clara, Cochiti, San Ildefonso, and Zia, met with the Valles Caldera Trust shortly after the United States' purchased the Valles Caldera, and that, in the following eighteen years, the Hopi, the Jicarilla Apache, the Navajo Nation, the Southern Ute, and the Pueblos of Santa Ana, Santa Clara, Cochiti, Santo Domingo, San Felipe, San Ildefonso, Laguna, Tesuque, and Zia, have consulted with the United States regarding the Valles Caldera. See United States' Br. at 26 (citing United States' Proposed Findings ¶¶ 327-33, 353-56, 431, 442-64, at 89-92, 98-99, 116, 119-26). The United States adds that Tribes attend consultation meetings only if they have interests to defend, and that such meetings with Valles Caldera staff reveal that the Jicarilla Apache, the Navajo Nation, and the Southern Ute maintain associations with the Valles Caldera, which, according to the United States, corroborates Liebmann's assertion that those Tribes likely made the Valles Caldera a dangerous place for Jemez Pueblo. See United States' Br. at 26-27 (citing United States' Proposed Findings ¶¶ 444-47, 450, 456-57, 461, at 119-125).

141. The United States argues that Jemez Pueblo cannot freeze its alleged aboriginal title at an arbitrary date before the Spanish conquered Jemez Pueblo, after which, according to the

United States, other Tribes, such as the Jicarilla Apache, dominated the Jemez Mountains region. See United States' Br. at 27 (citing Sac & Fox Tribe of Indians v. United States, 179 Ct. Cl. at 23).

142. The United States accepts the Court's ruling that Jemez Pueblo may establish aboriginal title if its claim fits within the three limited exceptions to the exclusivity requirement that the ICC recognized as providing a basis for compensating Tribes for lost aboriginal title, but the United States nevertheless maintains that the QTA does not permit Tribes to assert aboriginal title to claims against the United States, because, according to the United States, aboriginal title is not a traditional property right, but merely "'a right of occupancy which the sovereign grants and protects against intrusion by third parties but which right of occupancy may be terminated and such lands fully disposed of by the sovereign itself without any legally enforceable obligations to compensate the Indians,'" United States' Br. at 28-29, 29 n.14 (quoting Tee-Hit-Ton Indians v. United States, 348 U.S. at 279, and therefore "creates no rights against taking or extinction by the United States protected by the Fifth Amendment or any other principle of law," United States' Br. at 29 n.14 (quoting Tee-Hit-Ton Indians v. United States, 348 U.S. at 285).

143. The United States discusses the joint-and-amicable use exception to aboriginal title's exclusivity requirement, and argues that, even if Jemez Pueblo could find caselaw which stands for the proposition that a single Tribe can quiet title to land based on joint possession with another Tribe, Jemez Pueblo cannot establish that it used the Valles Caldera jointly and amicably with another Tribe in the region, because Jemez Pueblo lacked political unity with another Tribe sufficient to satisfy meet the exception's requirements. See United States' Br. at 29-30 (citing Pueblo of Jemez v. United States, Oct. 25 MOO at 83, 350 F. Supp. 3d at 1099 (quoting Strong v. United States, 518 F.2d 556, 561 (Ct. Cl. 1975); United States v. Pueblo of San Ildefonso, 513

F.2d at 1394)). The United States adds that, although the Pueblos of Jemez, Santa Ana, and Zia jointly claimed before the ICC to use a portion of the Valles Caldera, Santa Ana Pueblo and Zia Pueblo have since taken positions that undermine Jemez Pueblo's efforts to show that Jemez Pueblo owns the land exclusively. See United States' Br. at 30 (citing United States' Proposed Findings ¶¶ 123-30, 134, 173, at 33-35, 45).

144. The United States repeats its arguments regarding Zia Pueblo's Valles Caldera use and asserts that such use was distinct from Jemez Pueblo's use, was largely unknown to Jemez Pueblo, and was, at times, not amicable. See United States' Br. at 30-31 (citing United States' Proposed Findings ¶¶ 308, 359-426, 494, at 82, 99-115, 141). The United States adds that, regardless Pino's support, the Zia Pueblo Tribal Council never ratified the 2004 Memorandum of Understanding regarding Zia Pueblo support for Jemez Pueblo's Valles Caldera claim, which the memorandum expressly requires to take effect, and that, in 2005, Jemez Pueblo recognized that Zia Pueblo would be an obstacle to a potential, future Valles Caldera claim. See United States' Br. at 31-32 (citing United States' Proposed Findings ¶¶ 491-94, at 140-41).

145. The United States argues that Jemez Pueblo provides no evidence that it meets the ICC's joint-and-amicable use exception, because, according to the United States, Jemez Pueblo cannot, for example, reconcile the evidence that allegedly indicates support from the Pueblos of Cochiti, Santa Ana, and Taos with the evidence that Jemez Pueblo objects to Cochiti Pueblo's Redondo Peak shrines, that Santa Ana Pueblo supports returning only the lands to which Jemez Pueblo can prove exclusive use and occupancy, and that Taos Pueblo's representative at trial lacked sufficient knowledge to provide information regarding Taos Pueblo's Valles Caldera use. See United States' Br. at 32 (citing United States' Proposed Findings ¶¶ 12, 39, 135-37, 518, 541-

46, at 6, 14, 35-36, 149-50, 159-61; Jemez Pueblo's Proposed Findings ¶¶ 56, 59, at 22-24; Jemez Pueblo's Proposed Conclusions ¶¶ 67-71, at 43-44). The United States adds that Jemez Pueblo cannot reasonably contend that the Valles Caldera's other aboriginal users, including the Pueblos of Cochiti, Kewa, Nambe, Picuris, Pojoaque, San Felipe, San Ildefonso, Ohkay Owingeh, Sandia, Tesuque, Santa Clara, and Zia, as well as the Jicarilla Apache, the Navajo Nation, and the Southern Ute Tribe, used those lands jointly and amicably with Jemez Pueblo. See United States' Br. at 32-33 (citing United States' Proposed Findings ¶¶ 3, 64, 350, at 1-2, 20, 97).

146. Turning to the dominant-use expectation, the United States argues that Jemez Pueblo did not and could not dominate the large ancestral Keres and Tewa populations who surrounded the Valles Caldera and whose members since 1250 C.E. used their respective trails to access the Valles Caldera to hunt, gather plants, collect obsidian, and conduct other traditional practices. See United States' Br. at 34-35 (citing United States' Proposed Findings ¶¶ 9-12, 22, 314, 351, 370, at 4-6, 9-10, 84-85, 97, 104). The United States adds that, contrary to Jemez Pueblo's assertions regarding dominant use, the trial establishes that the Tewa Tribes, including Santa Clara and San Ildefonso, used the Valles Caldera even though they did not maintain sufficiently friendly relations with Jemez Pueblo to engage in trade with Jemez Pueblo before 1680 C.E. See United States' Br. at 34-35 (citing United States' Proposed Findings ¶ 350, at 97; Liebmann, Preucel and Aguilar, The Pueblo World Transformed at 147-48 ("The few interactions [between the Tewa and Jemez] that did occur were probably bellicose. Relations between the Tewas and Jemez were reportedly so hostile prior to the Pueblo Revolt that in 1634, one Jemez leader proudly wore around his neck . . . human ears from the Tewa warriors he had killed.")), and that, by 1863, relations between Jemez Pueblo and the Tewa Tribes had deteriorated such that the

Santa Clara Pueblo leader who participated in capturing Jemez Pueblo's members between the Valle Grande and Walatowa while recovering stolen livestock from Walatowa referred to Jemez Pueblo as "little better than the Navajo" responsible for stealing Santa Clara Pueblo's livestock. United States' Br. at 35-36 (quoting United States' Proposed Findings ¶ 65, at 20; and citing United States' Proposed Findings ¶ 64, at 20).

147. The United States argues that Jemez Pueblo's experts rejected the theory that Jemez Pueblo dominated the entire Valles Caldera, including Cerro del Medio, and repeated its assertions regarding the alleged deficiencies in Liebmann's obsidian analysis, which, according to the United States, do not accurately account for other Pueblos' and Tribes' Cerro del Medio obsidian use. See United States' Br. at 36-38 (citing United States' Proposed Findings ¶¶ 9-14, 503-08, 543-45, 547, 551, at 5-7, 145-47, 159-61). The United States adds that, aside from Liebmann explicitly rejecting the possibility that Jemez Pueblo actively guarded the Valles Caldera obsidian quarries, Jemez Pueblo offers no evidence regarding the number of trips that other Tribes' members took to Cerro del Medio's quarries or the number of Tribal members who would have been near those quarries at any given time. See United States' Br. at 38 (citing United States' Proposed Findings ¶¶ 483, 544, at 138, 160).

148. The United States argues that, regardless whether Jemez Pueblo could establish aboriginal title in or before the seventeenth century, "it would be of no moment," because Jemez Pueblo lost any such title after 1700, which Liebmann's unsuccessful efforts to fill a gap in Jemez Pueblo post-1700 obsidian use evidences. United States' Br. at 38 (citing United States' Proposed Findings ¶¶ 550, at 161-62). The United States adds that Liebmann's admissions that other Tribes negatively affected Jemez Pueblo's access to Cerro del Medio obsidian, and that Jicarilla Apache

Nation members used the Cerro del Medio obsidian source into the late 1800s or early 1900s, confirms that Jemez Pueblo did not have aboriginal title to the Valles Caldera in the nineteenth century. See United States' Br. at 38-39 (citing United States' Proposed Findings ¶¶ 51, 548-49, at 17-18, 161; Pueblo of Jemez v. United States, Oct. 25 MOO at 82, 350 F. Supp. 3d at 1098).

149. The United States argues that Ferguson recognizes that Jemez Pueblo did not control the entire Valles Caldera, and admitted that Santa Clara Pueblo historically travelled through [redacted], which, according to the United States, establishes that Santa Clara Pueblo did not travel into the Valles Caldera to trade with Jemez Pueblo, but instead procured obsidian from the Valles Caldera and worshipped on Redondo Peak during periods when such Valles Caldera use was adverse to Jemez Pueblo's interests, thereby disproving Jemez Pueblo's dominance argument. See United States' Br. at 39 (citing United States' Proposed Findings ¶¶ 483, 606, at 138, 165).

150. The United States argues that Fogleman admitted at the trial that most Pueblos would not have to pass through a Jemez Pueblo village at any time in history, and produced a map illustrating that, to access the Valles Caldera, Zia Pueblo specifically would not have to pass through the geographic location where Jemez Pueblo has remained for centuries. See United States' Br. at 39 (citing United States' Proposed Findings ¶¶ 14, at 7). The United States adds that Zia Pueblo had multiple trails across the Valles Caldera, because [redacted] See United States' Br. at 39-40 (citing United States' Proposed Findings ¶¶ 381, 383, 385, at 106-07).

151. The United States criticizes Fogleman's conclusion that, based on theoretical path analysis, Jemez Pueblo had a slightly shorter travel time to Redondo Peak and therefore was the Valles Caldera's dominant user, because, according to the United States, Fogleman does not address whether Jemez Pueblo exercised physical control or dominion over the Valles Caldera, because Fogleman based his model on a data set that excludes non-Jemez Pueblo ancestral Pueblos, and because Fogleman does not acknowledge that Jemez Pueblo did not occupy the three relevant ancestral Jemez Pueblo villages -- Unshagi, Nanishagi, and Hot Springs -- during much of the period from 1300 to 1700 C.E. See United States' Br. at 40-41 (citing United States' Proposed Findings ¶¶ 525-528, at 152-54; United States v. Seminole Indians of Fla., 180 Ct. Cl. 375, 386 (1967); Strong v. United States, 31 Ind. Cl. Comm. 141, 204 (1973)). The United States adds that Fogleman falsely denies that he wanted to use, but was unable to correctly use, a more sophisticated United States Geological Survey pedestrian evacuation tool which incorporates the impact of fatigue and land cover on travel times, and therefore did not incorporate land cover and slope's impact on travel time, which, according to the United States, likely biased Ferguson's model against other Pueblos, such as the Pueblos of Cochiti, Santa Clara, and San Ildefonso, who walk through flat, easily traversed meadows on their way to Redondo Peak. See United States' Br. at 41-42 (citing United States' Proposed Findings ¶¶ 522-24, at 151-52).

152. The United States argues that the trial establishes that Zia Pueblo has used the Valles Caldera for centuries in a manner not subject to Jemez Pueblo's dominion, including for pilgrimages throughout the Valles Caldera many times per year from the prehispanic era to the 1970s, and that Zia Pueblo communicated knowledge regarding the Valles Caldera's landscape to Captain Francisco Barrionuevo during the 1541 Coronado expedition. See United States' Br. at

42-43 (citing United States' Proposed Findings ¶¶ 148-53, 360-61, 367, 417, at 39-40, 100, 103, 113).

153. The United States argues that whether Jemez Pueblo had place names for Valles Caldera locations neither addresses nor establishes that Jemez Pueblo controlled the Valles Caldera, that Jemez Pueblo infrequently uses the ninety places that it names within the Valles Caldera, [redacted]. See United States' Br. at 43 (citing United States' Proposed Findings ¶¶ 242, 330, 333, 445, 453, 591-604, 606-07, at 65, 90, 92, 120, 122, 172-75). The United States adds that, even if having place names could be probative of a Tribe or a Pueblo's dominance, the trial establishes that multiple Tribes and Pueblos named places within the Valles Caldera; for example, the sixteen Zia Pueblo place names that Ellis identified in 1980. See United States' Br. at 43-44 (citing United States' Proposed Findings ¶¶ 362, 410-16, 605, at 101, 112-13, 174).

154. The United States argues that the trial establishes that, by the 1600s, disease and warfare with the Spanish decimated Jemez Pueblo's population, which enabled the Spanish to forcibly remove Jemez Pueblo to Walatowa, and that, by 1744, Jemez Pueblo's population had plummeted to as low as 100 individuals living twenty miles from Redondo Peak and remained below 1,000 individuals through, at a minimum, the beginning of the twentieth century, during which time the Navajo Nation, Jicarilla Apache Nation, and the Southern Utes were more powerful than Jemez Pueblo, and restricted Jemez Pueblo's Valles Caldera access and use. See United States' Br. at 45 (citing United States' Proposed Findings ¶¶ 33, 46-52, 54, at 12, 16-18).

155. The United States argues that, even if true, the two instances in the 1800s in which Jemez Pueblo allegedly defeated Navajo Nation groups do not establish Jemez Pueblo's dominance over the Navajo Nation, or over any other Pueblo or Tribe, and that Jemez Pueblo's oral history also contains at least two accounts wherein Navajo Nation groups drive Jemez Pueblo members from the Valles Caldera, which suggests at best that neither Jemez Pueblo nor the Navajo Nation dominated the Valles Caldera. See United States' Br. at 45 (citing Jemez Pueblo's Proposed Findings ¶¶ 399-400, at 110; United States' Proposed Findings ¶¶ 56, 316, at 18, 86). The United States adds that, in the 1800s, Navajo Nation members camped in the Valles Caldera and worshipped at Redondo Peak. See United States' Br. at 45 (citing United States' Proposed Findings ¶ 55, at 18).

156. The United States argues that Jemez Pueblo's oral history does not include stories wherein Jemez Pueblo members drive off members from the Jicarilla Apache, Ute, Santa Clara Pueblo, or San Ildefonso Pueblo, that the evidence instead indicates that these Tribes and Pueblos exercised dominion over Jemez Pueblo, and that the Jicarilla Apache in particular had easy access to the Valles Caldera from its nineteenth century population centers, from which it pilgrimaged to worship at Redondo Peak and to peel Banco Bonito trees, among other activities. See United States' Br. at 46 (citing United States' Proposed Findings ¶¶ 137-39, 548-49, at 36-37, 161).

157. The United States argues that the ability to exercise dominion and control over an area is a function of population, and that Jemez Pueblo's small population left it unable to defend against, much less control, the Navajo Nation, Jicarilla Apache Nation, Ute Tribe, Santa Clara Pueblo, or San Ildefonso Pueblo. See United States' Br. at 47 (citing United States' Proposed Findings ¶ 50, at 17; Native Vill. of Eyak v. Blank, 688 F.3d at 624-25; Osage Nation of Indians

v. United States, 19 Ind. Cl. Comm. at 490; Strong v. United States, 518 F.2d at 561 ("[O]ne of the primary characteristics of ownership is the desire and ability to exclude others from the area over which ownership is claimed.")).

158. The United States argues that, pursuant to the permissive use exception to aboriginal title's exclusive use requirement, Jemez Pueblo must establish that the Tribes who used the Valles Caldera did so subject to Jemez Pueblo's permission and perceived the lands as belonging to Jemez Pueblo, which Jemez Pueblo cannot prove, according to the United States, because the trial establishes that many Tribes and Pueblos, several of which were more powerful than Jemez Pueblo, used the Valles Caldera without either seeking or obtaining Jemez Pueblo's permission, or understanding that they used the lands pursuant to Jemez Pueblo's permission. See United States' Br. at 48-49 (citing 25 MOO at 83, Jemez Pueblo v. United States, 350 F. Supp. 3d at 1099 (quoting Strong v. United States, 518 F.2d at 572); Battise v. United States, 12 Cl. Ct. 426, 431 (Cl. Ct. 1987); Wichita Indian Tribe v. United States, 696 F.2d at 1385; Caddo Tribe of Okla. v. United States, 35 Ind. Cl. Comm. 321, 343, 351 (Ind. Cl. Comm. 1975); Native Vill. of Eyak v. Blank, 688 F.3d at 624)). The United States adds that former Jemez Pueblo governors Chinana, Gachupin, Madalena, and Yepa, among others, testified that, although the Tribes have asked Jemez Pueblo's permission to enter other areas, notably Jemez Pueblo's Tribal trust lands, no Tribe has sought Jemez Pueblo's permission to enter the Valles Caldera, and that Cochiti Pueblo governor Suina similarly stated that, although other Pueblos request access to Cochiti Pueblo's domain, Cochiti Pueblo has never asked permission to enter the Valles Caldera. See United States' Br. at 49-50 (citing United States' Proposed Findings ¶ 314, at 84-85; Jemez Pueblo's Proposed Findings ¶¶ 547-58, at 161-65). Moreover, according to the United States, other Tribes and Pueblos,

including the Pueblos of Zia, Santa Clara, San Ildefonso, and San Felipe, used and use the Valles Caldera without seeking Jemez Pueblo's permission. See United States' Br. at 47 (citing United States' Proposed Findings ¶¶ 164, 175, 308, 313-14, 351, 370, 443, at 43, 46, 82-84, 97, 104, 119).

159. The United States argues that at least fifteen Pueblos and Tribes' Redondo Peak use, all of which Jemez Pueblo considers offensive, actively opposes, and, regarding Zia Pueblo's particular use, has worked to circumvent, also defeats Jemez Pueblo's permissive use claim given Jemez Pueblo's hostility to and inability to prevent such use. See United States' Br. at 50-51 (citing United States' Proposed Findings ¶¶ 3, 55, 125, 128, 147, 175, 204, 317, 359-429, 501, 508, 510, 549, at 1-2, 18, 33-34, 39, 46, 54, 86, 99-116, 144, 147, 161).

160. The United States suggests that Jemez Pueblo members may consider Redondo Peak exclusive to Jemez Pueblo, because, according to the United States, Jemez Pueblo [redacted] See United States' Br. at 52 (citing United States' Proposed Findings ¶¶ 247-48, at 66).

161. The United States repeats its argument that, although Jemez Pueblo's testimony before the ICC that it used Redondo Peak and other Valles Caldera areas jointly with Santa Ana Pueblo and Zia Pueblo indicates that those three tribes were not adverse to each other, many Pueblos and Tribes who also used those lands, including the Jicarilla Apache Nation, the Navajo Nation, the Ute Tribe, and the Pueblos of Santa Clara and San Ildefonso were adverse to Jemez Pueblo, and that such use therefore was not subject to Jemez Pueblo's permission. See United States' Br. at 53-56 (citing United States' Proposed Findings ¶¶ 2-3, 6-7, 9-11, 19, 23, 33, 46-65, 67, 69, 128-29, 137-41, 186, 189, 193-95, 214, 282, 301, 305, 308, 328-37, 340-49, 353, 373, 439-

41, 443-44, 456-57, 461, 510, 520, 548-49, 552, at 1-5, 9-10, 12, 16-21, 34, 36-38, 48-51, 57-58, 74, 78, 80-82, 89-98, 104, 118-20, 123-25, 147, 150-51, 161-62).

162. The United States argues that many Pueblos and Tribes, including the Pueblos of Santa Clara, San Ildefonso, and Zia, the Jicarilla Apache Nation and the Navajo Nation view the Valles Caldera as a Tribal commons, which, according to the United States, disproves Jemez Pueblo's assertion that it dominated these groups or that these groups used the Valles Caldera subject to Jemez Pueblo's permission. See United States' Br. at 56-58 (citing United States' Proposed Findings ¶¶ 12, 123-31, 145-54, 301-13, 342, 351, 488, 524-25, at 6, 33-34, 39-40, 78-84, 95, 97, 139, 152). The United States adds that anthropologists, such as Ellis, Weslowski, and Anschuetz, have also confirmed that Tribes traditionally viewed the Valles Caldera as a commons, and that Jemez Pueblo's efforts to include the entire Valles Caldera in its aboriginal domain are not credible. See United States' Br. at 58-59 (citing United States' Proposed Findings ¶¶ 145-47, 172-75, 309-10, 313, 467-68, 482-87, at 39, 45-46, 82-84, 128-29, 138-39).

163. The United States argues that Tribal consultations with the Valles Caldera Trust and with Valles Caldera National Preserve staff directly undercut Jemez Pueblo's assertions that it is the Valles Caldera's exclusive aboriginal user, because, during such consultations, several Tribes elevated Tewa interests in the Valles Caldera above Jemez Pueblo's interests, despite two Pueblos later passing resolutions in 2016 offering support to Jemez Pueblo's Valles Caldera claim. See United States' Br. at 59-60 (citing United States' Proposed Findings ¶¶ 449, 451-52, at 121-22).

164. The United States argues that Jemez Pueblo cannot reconcile its assertion that it exercised dominion over the Valles Caldera with Jemez Pueblo's and other Tribes' statements that

Redondo Peak is a boundary marker, which, according to the United States, indicates that Jemez Pueblo considered the entire Valles Caldera either as another Tribe's exclusive territory, as jointly shared among the Pueblos of Santa Ana, Jemez, and Zia, or as a commons. See United States' Br. at 60-61 (citing United States' Proposed Findings ¶¶ 465-66, at 126-27). The United States adds that Ellis explicitly recognized that Redondo Peak is a boundary marker, and "'could well serve as a marker between two tribal territories or even as a corner indicating where more than two come together,'" and that "'all the tribes which deposit offerings on the top of such a mountain cannot possibly claim the entire mountain,'" which Ferguson recognizes. See United States' Br. at 61 (quoting United States' Proposed Findings ¶¶ 164, 175-76, at 43, 46 (emphasis in original)).

165. The United States argues that, consistent with testimony from P. Toya and Juanito Medina, Ellis acknowledges that the Pueblos of Santa Ana, Jemez, and Zia might have considered including the Valles Caldera in their joint land claims but for their knowledge that other Tribes used the lands, which, according to the United States, constitutes an admission that Jemez Pueblo knew that, if it had ever held aboriginal title to any portion of the Valles Caldera, it had lost that title by 1951, and that Ellis' statement that other Tribes considered the Valles Caldera sacred and used it for rituals is an explicit and credible admission that the Pueblos of Santa Ana, Jemez, and Zia were not the Valles Caldera's joint aboriginal users. See United States' Br. at 62-63 (citing United States' Proposed Findings ¶¶ 70-71, 121, 123, 154-55, 229, 235, 465-66, at 21-22, 32-33, 40-41, 63-64, 126-27). The United States adds that Ellis was uniquely situated to evaluate whether other Tribes used the Valles Caldera, because she worked for the Hopi Tribe, the Navajo Nation, and the Pueblos of Acoma, Jemez, Laguna, Nambe, Pojoaque, Taos, San Juan, San Ildefonso, Santa Ana, Santa Clara, Tesuque, and Zia, and knew that many Tribes and Pueblos historically

used Redondo Peak. See United States' Br. at 63 (citing United States' Proposed Findings ¶¶ 175, 466, at 46, 128).

166. The United States argues that, although Weslowski's work for the eighteen Pueblos' opposition to the Valles Caldera geothermal development project describes Jemez Pueblo's territory as more expansive than other anthropologists' descriptions, the Jemez Pueblo elders who spoke with Weslowski nonetheless confirm that Jemez Pueblo jointly and cooperatively used its aboriginal domain with, at a minimum, Santa Ana Pueblo and Zia Pueblo, and that the elders' did not believe that a single Pueblo could own land exclusively. See United States' Br. at 63-64 (citing United States' Proposed Findings ¶¶ 172-74, 467-68, at 45, 128-29).

167. The United States argues that, approximately twenty years ago, Whatley expanded Jemez Pueblo's aboriginal territory to include Redondo Peak based solely on information that Jemez Pueblo members provided, yet nevertheless excludes sizeable portions of the Valles Caldera, which, according to the United States, indicates that, for the past twenty years, Jemez Pueblo has understood that it does not possess aboriginal title to the entire Valles Caldera, and that Redondo Peak marks Jemez Pueblo's boundary. See United States' Br. at 64-65 (citing United States' Proposed Findings ¶¶ 226, 469-72, 474-75, 479-80, at 61-62, 130-31, 133, 135-36).

168. The United States repeats the standard to prove aboriginal title and thereafter repeats its argument that the trial establishes that, before this litigation, Jemez Pueblo understood that Spain dispossessed Jemez Pueblo of its Valles Caldera interests when it removed Jemez Pueblo to and prohibited farming beyond Walatowa, which, according to the United States, extinguished Jemez Pueblo's aboriginal title to any portion of those lands. See United States' Br. at 66-68 (citing United States' Proposed Findings ¶¶ 42-46, 49, 234, 469, 473, 569, at 15-17, 64,

130, 132, 167-68; Jemez Pueblo's Proposed Findings ¶¶ 371, 378, at 123, 125); Pueblo of Jemez v. United States, 790 F.3d at 1165-66; Pueblo of Jemez v. United States, Oct. 25 MOO at 119, 350 F. Supp. 3d at 1119; Sac & Fox Tribe of Indians v. United States, 179 Ct. Cl. at 21, 23). The United States adds that, after the Pueblo Revolt, Spain reaffirmed that it had extinguished Jemez Pueblo's aboriginal title when Spain formally granted the remaining Jemez Pueblo population the 17,500 acres that encompass Walatowa, which, according to the United States, is the land title that the United States confirmed in 1858. See United States' Br. at 69-70 (citing New Mexico v. Aamodt, 537 F.2d 1102, 1108-09 (10th Cir. 1976)("In the Treaty of Guadalupe Hidalgo, the United States agreed to protect rights recognized by prior sovereigns. In 1858, Congress specifically confirmed the land titles of the Pueblos with which we are concerned."); Pueblo of Jemez v. United States, Oct. 25 MOO at 121, 350 F. Supp. 3d at 1122; United States' Proposed Findings ¶¶ 44-48, at 15-16; Jemez Pueblo's Proposed Conclusions ¶ 18, at 12).

169. The United States argues that, regardless whether Spain extinguished Jemez Pueblo's aboriginal title, Jemez Pueblo Tribal historian Joe Sando admitted repeatedly that the United States extinguished Jemez Pueblo's aboriginal title when the United States gave the Valles Caldera to private owners, who thereafter prevented Jemez Pueblo's access to the Valles Caldera for activities including hunting and eagle catching. See United States' Br. at 70 (citing United States' Proposed Findings ¶¶ 230-32, at 63).

170. The United States maintains that Congress' grant to the Baca heirs conveyed "full, absolute, and unconditional title" which is "not subject to challenge," and thus sufficient standing alone to extinguish aboriginal title, because the Baca heirs' title was not "contingent[] upon subsequent discoveries"; that is, if the Baca heirs took land that others later alleged to have

occupied, such occupation did not void their title, because the statute focuses on whether the lands at issue were known to be vacant. See United States' Br. at 71-72 (citing Shaw v. Kellogg, 170 U.S. 312, 343 (1898)). Moreover, according to the United States, the Surveyor General had the "'duty to separate from the public lands the pueblos or individual confirmed claims,'" which, according to the United States, applies particularly to the Baca heirs' parcels, and, thus, to the extent claimants did not present their land claims to the Surveyor General, prevents untimely claimants from later asserting preexisting rights. United States' Br. at 72 (quoting Lane v. Watts, 234 U.S. 525, 528-29 (1914); and citing Lane v. Watts (Lane II), 235 U.S. 17, 22 (1914)).

171. The United States argues that, even if the Court views the 1860 grant as merely one factor in a multi-factor extinguishment test, the trial establishes that the Baca heirs and their successors in interest settled the Valles Caldera pursuant to a Congressionally authorized grant, and thereafter created substantial grazing operations, built ranches, fenced the perimeter, controlled access to fishing, logged many trees, patrolled to prevent trespass, erected high-end guest quarters, established hunting businesses, repeatedly transferred title, prevailed over the United States in an early twentieth century boundary dispute, and, during the Dunigan's ownership from 1962 to 2000, cultivated a reputation among locals that the Valles Caldera was a dangerous place to trespass. See United States' Br. at 72-73 (citing United States' Proposed Findings ¶¶ 72-117, 22-32; Joint Proposed Findings ¶¶ 17-20, at 4-5).

172. The United States argues that, even if Jemez Pueblo possessed aboriginal title to any portion of the Valles Caldera after 1860, the United States extinguished that title when the United States Army constructed and operated a fort in the Valle Grande in 1863. See United States' Br. at 73-74 (citing Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. 768, 787-88

(1993)("Even if Indians continued to occupy some portion of the Fort's land, . . . a military base destroys the exclusivity prong of the aboriginal title test. . . . That the government established a military outpost is even more inconsistent with Indian title than occupation by white settlers."). The United States adds that the United States built the fort in the Valles Grande specifically to combat the threat that Navajo Nation members posed to that area, which, according to the United States, provides additional proof that Jemez Pueblo did not dominate the Navajo Nation. See United States' Br. at 72-73 (citing United States' Proposed Findings ¶¶ 57-63, 67, 69, at 19-21).

173. The United States recites the Tenth Circuit's mandate in this case that substantial interference with Jemez Pueblo's traditional Valles Caldera use will prevent Jemez Pueblo from establishing aboriginal title and argues that the Court should reject Jemez Pueblo's attacks on the ICC's legitimacy, because the Tenth Circuit's opinion controls, and the Tenth Circuit cited the ICC's decision in United States v. Pueblo of San Ildefonso to illustrate how interference defeats a claim based on actual and continuous use. See United States' Br. at 74-76 (citing Pueblo of Jemez v. United States, 790 F.3d at 1166-67).

174. The United States further argues that the Court should disregard Jemez Pueblo's collateral attacks on the ICC's legitimacy, because Jemez Pueblo introduced no evidence at the trial undermining the ICC's legitimacy and instead relies on unintroduced documents that Jemez Pueblo appended to its motion in limine, a practice to which the United States objects. See United States' Br. at 76 (citing Jemez Pueblo's Proposed Conclusions ¶¶ 6, 101, at 2-7, 57-60). The United States adds that the parties in United States v. Pueblo of San Ildefonso resolved their dispute in a manner which disproves Jemez Pueblo's suggestion that San Ildefonso Pueblo's attorneys were biased, because, according to the United States, San Ildefonso Pueblo negotiated a

Congressionally approved settlement that returned 7,100 acres to San Ildefonso Pueblo, which indicates to the United States that, if San Ildefonso could pursue a trespass action in the ICC, Jemez Pueblo could also pursue such an action. See United States' Br. at 76 (citing Pueblo de San Ildefonso Claims Settlement Act of 2005, §§ 2(a)(9), 2(b)(3), 6(b)(2)(A), P.L. 109-286, 120 Stat. 1218 (Sept. 27, 2006)).

175. The United States further asserts that Jemez Pueblo's attacks on the ICC are misleading, because, even if Jemez Pueblo's assertion that it had title to the Valles Caldera in 1946 was correct, it would not save its aboriginal title claim given that Congress intended the ICC to resolve all such claims that existed in 1946, which Felix Cohen[189] confirmed when he testified to

[189]Born in 1907, Felix S. Cohen has been described as "the Blackstone of American Indian Law." Cohen's Handbook of Federal Indian Law at xiv (Nell Jessup Newton et al. eds., 2012)("Cohen's Handbook"). He served in the Department of the Interior ("DOI") for fourteen years, during which time he "was a principal drafter of the Indian Reorganization Act of 1934, a litigator, a Special Assistant to the Attorney General, and Associate Solicitor of the Department of the Interior." Cohen's Handbook at xiv. After resigning from the DOI in 1948, Mr. Cohen received the Distinguished Service Award, which is the DOI's highest honor. See Cohen's Handbook, supra, at xiv. Mr. Cohen then engaged in private practice in Washington, D.C., devoting much of his time to Indian law while also teaching at various law schools and continuing to write, until his death on October 19, 1953, at the age of forty-six. See Cohen's Handbook, supra, at xiv.

In describing Mr. Cohen's seminal work, the 1942 Handbook of Federal Indian Law, the Honorable Felix Frankfurter, former Associate Justice of the Supreme Court of the United States, said:

> Only a ripe and imaginative scholar with a synthesizing faculty would have brought luminous order out of such a mish-mash. He was enabled to do so because of his wide learning in the various fields of inquiry which are relevant to so-called technical legal questions. Learning would not have sufficed. It required realization that any domain of law, but particularly the intricacies and peculiarities of Indian law, demanded an appreciation of history and understanding of the economic,

Congress that the ICCA's goal is to "plug all the loopholes" so that Tribes could not pursue then-existing claims after the limitation period. United States' Br. at 76-77 (quoting H. R. 1198 and H.R. 1341: Bills to Create an Indian Claims Commission, to Provide for the Powers, Duties and Functions Thereof, and For Other Purposes Before the Committee on Indian Affairs, House of Representatives, 79th Cong. 1st Sess. at 67 (1945); and citing United States' Proposed Findings ¶¶ 119-34; 154, at 32-35, 40).

176. The United States argues that Jemez Pueblo admitted at the trial that the Bonds' and Dunigans' restrictions during the twentieth century on Jemez Pueblo's Valles Caldera access for activities, such as hunting, grazing, and collecting timber, harmed Jemez Pueblo mentally, spiritually, psychologically, and physically, and resulted in Valles Caldera use that was so minimal that Jemez Pueblo had to reestablish its lost connection to the Valles Caldera after the United States' purchase in 2000. See United States' Br. at 77-78 (citing United States' Proposed Findings ¶¶ 220-27, 229-34, 236, 238-42, 251-86, 288, at 59-65, 67-75).

177. The United States argues that, by the twentieth century's end, private owners had restricted Jemez Pueblo's Valles Caldera access almost entirely to occasional, permissive trips to Redondo Peak on either June 13 or June 24, and that, although Jemez Pueblo members occasionally snuck in, the fences that surrounded the Valles Caldera often deterred potential

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> social, political and moral problems in which the more immediate problems of that law are entwined.

Cohen's Handbook at xiv (quoting Felix Frankfurter, Foreword to Cohen, Dialogue on Private Property, 9 Rutgers L. Rev. 355, 356 (1954)). Mr. Cohen's Handbook of Federal Indian Law, now in its fifth edition, is generally regarded as "the most enduring contribution of this truly eminent scholar." Cohen's Handbook at xiv.

trespassers. See United States' Br. at 78-79 (citing United States' Proposed Findings ¶¶ 245-47, 249-50, at 65-67). The United States adds that such restrictions left Jemez Pueblo without knowledge regarding other Tribes' and Pueblos' Valles Caldera use, such as [redacted]. See United States' Br. at 79 (citing United States' Proposed Findings ¶¶ 248, 335, at 66, 93).

178. The United States argues that Jemez Pueblo's post-2000 Valles Caldera use is not probative whether Jemez Pueblo possessed aboriginal title before 2000, because, according to the United States, Jemez Pueblo dramatically increased its Valles Caldera use after 2000 to buttress its aboriginal title claims, which, the United States insists, merely serves to highlight Jemez Pueblo's minimal Valles Caldera use before 2000. See United States' Br. at 80 (citing Coletti v. Cudd Pressure Control, 165 F.3d 767, 775 (10th Cir. 1999); Lust v. Sealy, Inc., 383 F.3d 580, 588 (7th Cir. 2004); Baugus v. CSX Transp., Inc., 223 F.R.D. 469, 470 (N.D. Ohio 2004)(Carr, J.); Chicago, Wilmington & Franklin Coal Co. v. Jilek, 42 F. Supp. 200, 202 (E.D. Ill. 1942)(Lindley, J.); United States' Proposed Findings ¶ 222 at 60). According to the United States, Jemez Pueblo used the Valles Caldera infrequently between 2000 and 2005, but in 2005 connected its Valles Caldera use to its QTA claim and thereafter dramatically increased such use, which resulted in dozens of formal access requests that Jemez Pueblo leadership facilitated and, in at least one instance, mandated for all Tribal employees. See United States' Br. at 80-83 (citing United States' Proposed Findings ¶¶ 211, 218, 286, 290, 292-93, 295-98, 300, 339, at 56, 59, 74-78, 94; Jemez Pueblo's Proposed Findings ¶ 459, at 143-44).

179. The United States repeats its argument that the ICC and the Valles Caldera geothermal litigation records from the 1950s through the 1980s make clear that many Tribes and Pueblos, including Jemez Pueblo, did not consider Jemez Pueblo to possess aboriginal title to the Valles Caldera, and therefore, according to the United States, the Tribal resolutions that Jemez Pueblo negotiated between 2012 and 2017 do not establish Jemez Pueblo's aboriginal title, because several resolutions contradict the relevant Tribe's more credible pre-litigation statements, such as those that San Ildefonso Pueblo made regarding San Ildefonso Pueblo's Valles Caldera use, because Jemez Pueblo negotiated the resolutions in an improper manner, for example, in exchange for supporting other Pueblos' land acquisitions, which indicates that the resolutions are essentially manufactured evidence, and because the resolutions indicate that many Tribes rejected Jemez Pueblo's proposed language and instead drafted language either stating that Jemez Pueblo occupied only some land within the Valles Caldera or refraining to state that any land within the Valles Caldera was exclusive to Jemez Pueblo. See United States' Br. at 83-86 (citing United States' Proposed Findings ¶¶ 193, 195, 488, 490-99, 501-06, 514, 517-18, at 50-51, 139-46, 148-50). The United States notes that Santa Clara Pueblo and Zia Pueblo did not pass resolutions supporting Jemez Pueblo's Valles Caldera claim, and adds that many Tribes and Pueblos, including the Hopi Tribe, and the Navajo Nation, and the Pueblos of Laguna, Santa Clara, and Tesuque made statements at consultation meetings which reveal that they do not view the Valles Caldera as exclusive to Jemez Pueblo, and instead indicate that those Tribes consider the Valles Caldera both sacred and a commons. See United States' Br. at 86-87 (citing United States' Proposed Findings ¶¶ 153, 304, 306, 311-12, 313, 330, 345, 437, 449, 451-52, at 40, 79-83, 90, 95, 118, 121-22).

180. The United States argues that, through numerous statutes passed over many decades, Congress has expanded Jemez Pueblo's land base from the 17,500-acre Spanish grant to approximately 65,571 acres, including 35,516 acres of the former Ojo del Espiritu Santu grant, in recognition that Jemez Pueblo is primarily an agrarian society, which the United States insists that Congress would not have done had Congress believed that Jemez Pueblo possessed title to the fertile grazing land within the Valles Caldera. See United States' Br. at 87-88 (citing Act of August 2, 1956, 70 Stat. 941 (1956); United States' Proposed Findings ¶¶ 44-45, 614, at 15-16, 177). The United States adds that Jemez Pueblo's Ojo del Espiritu Santu grant acquisition stands in contrast to Jemez Pueblo's effort to obtain United States' land under the QTA, because Jemez Pueblo's ICC case sought compensation for its interest in the Ojo del Espiritu Santu grant, a portion of which Jemez Pueblo ultimately obtained only through statute, similar to how Taos Pueblo and Zia Pueblo obtained title to lands over which they asserted aboriginal title only through statute, and here Congress has declined to further extend Jemez Pueblo's land base, which, according to the United States, "therefore militates in favor of finding that Congress extinguished any interest Plaintiff might have possessed in the Preserve lands." United States' Br. at 88 (citing Act of August 2, 1956, Pub. L. No. 84-926, 70 Stat. 941 (1956); Act to amend Section 4 of the Act of May 31, 1933, P. L. 91-550, 84 Stat. 1437, 1439 (Dec. 15, 1970); United States' Proposed Findings ¶¶ 155, 197, 615, at 40-41, 52, 177).

181. The United States argues that the Pueblos of Jemez, Santa Ana, and Zia brought a joint claim before the Court of Private Land Claims, which Congress established to address New Mexico land claims, seeking title to the Ojo del Espiritu Santu grant located between the Valles Caldera and Jemez Pueblo, and the Supreme Court upheld the Court of Private Land Claims'

conclusion that Jemez, Zia, and Santa Ana had petitioned Spain merely for grazing rights -- not title -- to the land, which indicates to the United States that Jemez Pueblo understood how to petition Spain to recognize Jemez Pueblo's grazing rights, that Spain granted to the Pueblos of Jemez, Santa Ana, and Zia some grazing right to lands other than the Valles Caldera, that Spain did not grant Jemez Pueblo a similar right to graze within the Valles Caldera, and that, by 1897, Jemez Pueblo was unable to graze within the Valles Caldera. See United States' Br. at 90-91 (citing Pueblo of Zia v. United States, 168 U.S. 198, 203, 207 (1897)).

182. The United States argues that Congress' effort to clarify title through the Pueblo Lands Act, which, according to the United States, enabled non-Indians through adverse possession to obtain title to lands that Pueblos claimed, "militates in favor of holding that any title Plaintiff possessed to the Preserve lands has been extinguished," because, according to the United States, "by 1924 the Preserve lands had been possessed under color of title by ranchers who created substantial grazing operations by the 1870s, built ranches by 1883, and fenced the Preserve lands by 1917." United States' Br. at 91-92 (citing Pueblo Lands Act, § 4, 43 Stat. 636, 637 (June 7, 1924); Mountain States Tel. and Tel. v. Pueblo of Santa Ana, 472 U.S. 237, 240, 244 (1985); United States v. Trujillo, 853 F.2d 800, 801 (10th Cir. 1988); S. Rep. No. 492, 68th Cong., 1st Sess., 5 (1924)).

183. The United States argues that the trial establishes that Congress rejected any notion that Jemez Pueblo possessed exclusive aboriginal title to any portion of the Valles Caldera, in part, because, after consulting with many Tribes and Pueblos, Congress declined both Jemez Pueblo's request to purchase 200 acres on Redondo Peak and request to establish a seat on the Valles

Caldera Trust Board dedicated solely to Jemez Pueblo. See United States' Br. at 92-94 (citing United States' Proposed Findings ¶¶ 196, 198-203, at 52-54).

184. The United States argues that the Preservation Act reflects and enshrines Congress' understanding that Jemez Pueblo was not the only Tribe with both historic and current interests in the Valles Caldera, and that many Tribes, including the Pueblos of San Ildefonso, Santa Clara, and Zia, discussed their historical, traditional, and cultural ties to the Valles Caldera before Congress. See United States' Br. at 92-94 (citing United States' Proposed Findings ¶¶ 189-95, at 49-51). The United States adds that the Preservation Act also provides for other Tribes' inclusion in consultation and prohibits the Valles Caldera Trust from "'dispos[ing] of any real property'" in the Valles Caldera. See United States' Br. at 94-95 (quoting Preservation Act, 114 Stat. 598 § 108(c)(3); and citing Preservation Act, 114 Stat. 598 §§ 104(g), 106(b)(4), 108(c)(1), 108(f)(5)). Moreover, the United States continues, Congress completed its Valles Caldera acquisition in 2006, when it passed legislation authorizing the United States to condemn the Valles Caldera's outstanding mineral interests for approximately $3,800,000.00. See United States' Br. at 95 (citing United States v. Harrell, 642 F.3d 907, 910-11 (10th Cir. 2011); United States' Proposed Findings ¶ 210, at 56).

185. The United States argues that the trial establishes that, in 2015, Congress again declined to transfer the Valles Caldera to Jemez Pueblo, and instead transferred those lands to the National Park Service, which, according to the United States, is an action that per se extinguished Jemez Pueblo's unrecognized aboriginal title, because it explicitly created rights for other Tribes and Pueblos, including Santa Clara Pueblo and San Ildefonso Pueblo, rejected precisely the relief that Jemez Pueblo seeks in this case, and imposed on the Valles Caldera a statutory management

scheme that is inconsistent with alleged aboriginal rights, including the requirement that Redondo Peak remain accessible to other Tribes and Pueblos. See United States' Br. at 95-96. The United States adds that, in contrast to Jemez Pueblo's unqualified support for the United States' acquisition in 2000, Jemez Pueblo in 2010 for the first time asserted its aboriginal title claim before Congress. See United States' Br. at 96-97 (citing United States' Proposed Findings ¶¶ 211-16, at 56-58).

186. The United States argues that the trial also establishes that the Preservation Act and transfer to the National Park Service together not only restrict Jemez Pueblo's alleged historic use for hunting, but also permit members of other Tribes and the public to visit Redondo Peak in a manner that is contrary to Jemez Pueblo's religious values, because, according to the United States, Jemez Pueblo currently is opposed to non-Jemez Pueblo members visiting Redondo Peak, yet, under the National Park Service, the entire Valles Caldera is open to pedestrian access. See United States' Br. at 98 (citing Nat'l Def. Authorization Act for Fiscal Year 2015, 16 U.S.C. § 698v-11(b)(1), (c)(1), 128 Stat. 3292, 3792-96 (Dec. 19, 2014); United States' Proposed Findings ¶¶ 204-05, 212-13, at 54-57).

187. The United States argues that Santa Clara Pueblo is a necessary and indispensable party to this litigation, because Jemez Pueblo's Valles Caldera claim threatens Santa Clara Pueblo's many interests in the Valles Caldera, including its "settled expectation" that it can continue to worship on Redondo Peak. See United States' Br. at 99 (citing Fed. R. Civ. Pro. 19). The United States acknowledges that, in the SJ Order, the Court concludes that Santa Clara Pueblo is not a necessary and indispensable party to this case and expressed confidence in the United States' ability to defend Santa Clara Pueblo's interests in the United States' continued Valles

Caldera stewardship, but nevertheless urges the Court to reexamine the United States rule 19 argument, because, according to the United States, the SJ Order considers primarily Santa Clara Pueblo's conservation and access easement and because the trial establishes that Santa Clara Pueblo has longstanding Valles Caldera interests not yet admitted during the summary judgment stage. See United States' Br. at 99-100 (citing United States' Proposed Findings ¶¶ 317, 324-25, 353, 358, 374-78, 489, 508-13, 608-10, 623, at 86-89, 98-99, 105, 139-40, 147, 175-76, 180). The United States adds that Santa Clara Pueblo does not believe that the United States can adequately represent its interests in this case, that Santa Clara Pueblo's religious leaders prohibit sharing specific information regarding Santa Clara Pueblo's Valles Caldera use, and that the [redacted] See United States' Br. at 101 (citing United States' Proposed Findings ¶¶ 334, 338, 358, at 93-94, 99).

188. The United States argues that Zia Pueblo's long-standing cultural and religious interests in, for example, [redacted] together with Jemez Pueblo's opposition to Zia Pueblo's Redondo Peak use, makes Zia Pueblo a necessary party to this case. See United States' Br. at 101 (citing United States' Proposed Findings ¶¶ 3, 317, 359-409, 501, 508-13, at 1-2, 86, 99-112, 144, 147).

189. The United States argues that, although Cochiti Pueblo passed a Tribal resolution stating that it is not a necessary party to this case, Jemez Pueblo procured the Cochiti Pueblo resolution only after misrepresenting to Cochiti Pueblo that Jemez Pueblo would allow Cochiti

Pueblo to continue to worship on Redondo Peak, and that Jemez Pueblo had no plans to further the Valles Caldera's economic development, which, according to the United States, destroys the foundation for Cochiti Pueblo's decision regarding whether it is a necessary party. See United States' Br. at 102 (citing United States' Proposed Findings ¶¶ 3, 499-513, 580, at 1-2, 143-47, 169-70). The United States notes that it was unable to present to Cochiti Pueblo statements which, according to the United States, confirm Jemez Pueblo's opposition to other Pueblos' Redondo Peak use, [redacted]. See United States' Br. at 102 n.43.

190. The United States argues that, similar to Cochiti Pueblo's Tribal resolution, San Ildefonso Pueblo passed its Tribal resolution supporting Jemez Pueblo's Valles Caldera claim only after receiving assurances that Jemez Pueblo would permit San Ildefonso Pueblo to continue its traditional Valles Caldera use, which includes worship on Redondo Peak, yet, according to the United States, Jemez Pueblo does not consider such worship a traditional use for Pueblos other than Jemez Pueblo. See United States' Br. at 103 (citing United States' Proposed Findings ¶¶ 3, 9, 33, 64, 128-29, 136-39, 186, 189, 193-95, 282, 305, 308, 373, 439-41, 443, 453, 456, 495, 552, 574, at 1-2, 4-5, 12-13, 20, 34, 36-37, 48-49, 50-51, 74, 80-82, 104, 118-19, 123-24, 162, 168).

191. The United States argues that the Jicarilla Apache Nation is also a necessary party to the case, because, according to the United States, the Jicarilla Apache Nation historically worshipped at Redondo Peak, which is use that Jemez Pueblo opposes, and collected obsidian from Cerro del Medio, and, in modern times, the Jicarilla Apache Nation has consulted with Valles Caldera staff regarding the Valles Caldera's north-south corridor and with Congress regarding the Valles Caldera's transfer to the National Park Service. See United States' Br. at 103 (citing United

States' Proposed Findings ¶¶ 19, 33, 137-39, 141, 214, 301, 444, 456-57, 461, 510, 548-49, at 9, 12-13, 36-38, 57-58, 78, 119-20, 123-25, 147, 161).

192. The United States asserts that Jemez Pueblo did not attempt to join necessary parties to the case as rule 19 requires and adds that, regardless, joinder is infeasible, because Indian Tribes's sovereign status typically immunizes them from suit. See United States' Br. at 104 (citing N. Arapaho Tribe v. Harnsberger, 697 F.3d 1272, 1281 (10th Cir. 2012); United States' Proposed Findings ¶ 357, at 99).

193. The United States argues that, because joinder is infeasible, the Court must consider four factors -- (i) prejudice; (ii) the extent that prejudice can be avoided; (iii) adequacy of a judgment rendered in the party's absence; and (iv) whether the plaintiff would have an adequate remedy if the Court dismissed the action for nonjoinder -- to determine whether it should dismiss the case, the balance of which, according to the United States, weighs in dismissal's favor. See United States' Br. at 104 (citing Fed. R. Civ. P. 19(b)). The United States argues that Jemez Pueblo's threat to multiple Pueblos' interests within the Valles Caldera evidences prejudice sufficient to satisfy the first factor. See United States' Br. at 104-05 (citing N. Arapaho Tribe v. Harnsberger, 697 F.3d at 1281). The United States argues that the Court cannot lessen or avoid the prejudice, because judgment in Jemez Pueblo's favor would restrict multiple Pueblo's access to cultural and religious sites within the Valles Caldera, which, according to the United States, satisfies the second factor. See United States' Br. at 105 (citing N. Arapaho Tribe v. Harnsberger, 697 F.3d at 1282-83; United States' Proposed Findings ¶¶ 334, 373-78, 508-13, at 93, 104-105, 147). The United States argues that, at a minimum, judgment in Santa Clara Pueblo's absence would be inadequate, because resolving the case without Santa Clara Pueblo could create future

disputes between Jemez Pueblo and Santa Clara Pueblo over Valles Caldera access, and the Pueblos' sovereign immunity would likely lead to results that are inconsistent with this case, which, according to the United States, satisfies the third factor. See United States' Br. at 105-06 (citing N. Arapaho Tribe v. Harnsberger, 697 F.3d at 1283; United States' Proposed Findings ¶ 358, at 99). The United States argues that Santa Clara Pueblo's, and other Tribes' and Pueblos', sovereign immunity leaves the Court with no room to balance the fourth rule 19(b) factor, because the Court cannot exercise its authority to join such entities, a fact which standing alone favors dismissal, according to the United States. See United States' Br. at 106-07 (citing Santa Clara Pueblo v. Martinez, 436 U.S. 49, 58; Davis v. United States, 343 F.3d 1282, 1293 (10th Cir. 2003)).

194. The United States argues that, because the Pueblos of Jemez, Santa Ana, and Zia presented evidence showing that they jointly used areas within the Valles Caldera, including Redondo Peak, to the ICC, because the Court of Claims issued a final judgment on the merits of the three Pueblos' claim for aboriginal title extinguishment, and because, according to the United States, the present action is essentially identical to the prior claim, section 22(a) of the ICCA bars Jemez Pueblo's Valles Caldera claim. See United States' Br. at 110-112 (citing ICCA § 22(a) ("The payment of any claim, after its determination in accordance with this Act, shall be a full discharge of the United States of all claims and demands touching any of the matters involved in the controversy."); Hatch v. Boulder Town Council, 471 F.3d 1142, 1148-54 (10th Cir. 2006); United States' Proposed Findings ¶¶ 121-34, 465, at 32-35, 126-27).

195. The United States argues that the trial establishes that the Spanish, other Tribes, and Valles Caldera's private owners' pre-1946 interference with Jemez Pueblo's alleged aboriginal uses is sufficiently substantial to trigger the ICCA statute of limitations to which the Tenth Circuit

refers as a potential bar to Jemez Pueblo's Valles Caldera claim. See United States' Br. at 112-16 (citing Pueblo of Jemez v. United States, 790 F.3d at 1166; id. at 1168 ("On the present record, we cannot say that either the Baca grant or use of the land by the Baca heirs or their successors establish as matter of law that the Jemez Pueblo had a pre-1946 claim against the government under the ICCA."); United States' Proposed Findings ¶¶ 46-52, 54, 64-65, 70, 87, 92-95, 104-05, 107-08, 128-29, 135-41, 154, 175-85, 221, 223-24, 227, 229-33, 235-37, 240, 278-79, 433-34, 465-66, 484, at 16-21, 25-29, 34-38, 40, 46-48, 60-64, 72, 117, 126-27, 138).

196. The United States argues that Jemez Pueblo's admissions that it lost both use of and interest in the Valles Caldera between 1951 and 2000 are similarly fatal to its aboriginal title claim, because, according to the United States, such admissions represent claim accrual for statutory limitations purposes, and, although the Tenth Circuit focuses its analysis on the ICCA's barrier to claims that predate 1946, the ICCA subjects claims accruing after 1951 to a six-year statute of limitations and vests jurisdiction in the Court of Claims and its successor court, the Court of Federal Claims. See United States' Br. at 116-18 (citing ICCA § 24; John R. Sand & Gravel Co. v. United States, 552 U.S. 130, 132 (2008); United States' Proposed Findings ¶¶ 71, 79-81, 118, 156, 222, 228, 235, 240-43, 245, 247, 249-85, at 22-24, 32, 41, 60, 62, 64-74).

197. The United States argues that the QTA's statute of limitations bars Jemez Pueblo's Valles Caldera claim, because, according to the United States, an adverse interest that clouds alleged aboriginal title triggers the QTA regardless whether the interest is valid, and Jemez Pueblo does not dispute that the United States repeatedly acted to acquire real property interests in the Valles Caldera in 1951, when it acquired and recorded a pipeline easement, and, in 1999, when it condemned a perpetual and assignable easement for that pipeline. See United States' Br. at 118

(citing Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d 1165, 1182 (10th Cir. 2010); Spirit Lake Tribe v. North Dakota, 262 F.3d 732, 744 (8th Cir. 2001); United States' Proposed Findings ¶¶ 77-78, 81, at 23-24).

198. The United States argues that laches also bars Jemez Pueblo's aboriginal title claim to Valles Caldera, because Jemez Pueblo delayed bringing its Valles Caldera claim, and instead strongly supported the United States' acquisition, and this delay heavily prejudices the United States, and other Pueblos and Tribes, because the United States expended significant time and resources to acquire, restore, and maintain the Valles Caldera after other Pueblos and Tribes voiced strong support favoring United States' acquisition based on the understanding that the United States, rather than Jemez Pueblo, would adequately represent and protect their interests in the land. See United States' Br. at 118-22 (citing SJ Order at 7-8 (quoting Biodiversity Conservation All. v. Jiron, 762 F.3d 1036, 1090-91 (10th Cir. 2014)); United States' Proposed Findings ¶¶ 118, 156, 189, 196-203, 206-08, 304, 486, 623, at 32, 41, 44, 52-55, 79-80, 138, 180).

199. The United States argues that Jemez Pueblo's reliance on a joint brief that the United States, and the Pueblos of Jemez, Santa Ana, and Zia, filed in the ongoing United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman water rights litigation is misplaced, not only because the United States does not admit in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman that Jemez Pueblo has or ever had title to the Valles Caldera, but also because the joint brief focuses on water rights based on use outside the Valles Caldera, and because Judge Vázquez adopted the conclusion of the Honorable William P. Lynch, former United States Magistrate Judge for the United States District Court for the District of New Mexico, that, although the Pueblos possessed aboriginal water rights before the Spanish occupation, Spain exercised complete

dominion and control over New Mexico in a manner adverse to the Pueblos and thus extinguished the Pueblos' aboriginal water rights. See United States' Br. at 122-124 (citing United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, Opening Br. of Pueblos of Santa Ana, Zia, and Jemez and the United States, On Issues 1 and 2, at 4-6; United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CV 83-1041 MV/WPL, 2016 U.S. Dist. LEXIS 191054, at *4, 8, 21-22; United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CV 83-1041 MV/WPL, 2017 U.S. Dist. LEXIS 164733, at *10-11 (D.N.M. Sept. 30, 2017)(Vázquez, J.)); United States' Proposed Findings ¶¶ 611-12, at 176).

200. The United States disputes Jemez Pueblo's assertion that [redacted] United States' Br. at 124-26 (quoting Jemez Pueblo's Proposed Findings ¶ 172, at 69; and citing Jemez Pueblo's Proposed Findings ¶¶ 180, 182-83, 185-86, 192, 195, 197, 204, 206, 208-09, at 72-80; United States' Proposed Findings ¶¶ 59, 85, 87, 104-05, 107, 109, 111, 113, 221-28, 230, 232-34, 237-41, 243, 271, at 19, 25, 29-31, 60-65, 71).

201. The United States disputes Jemez Pueblo's assertion that the United States acknowledges Jemez Pueblo's continuous Redondo Peak use, because, according to the United States, the United States has consistently argued that the Bond and Dunigan restrictions generally limited Jemez Pueblo Redondo Peak access to twice per year, that Douglass affiliated the Redondo Peak shrine with Keres Pueblos, that the Spanish exiled Jemez Pueblo from its traditional

homeland, and that Jemez Pueblo's population was too low to continuously use any land beyond that proximate to Walatowa. See United States' Br. at 126-27 (citing Jemez Pueblo's Proposed Findings ¶¶ 214, 228, 272, at 81, 86, 99; United States' Proposed Findings ¶¶ 22-23, 47, 49-51, 95, 97-98, 104, 107, 185, 222, 224-26, 228, 230, 232, 234, 237, 247, 361, 389, 402, 432, 445, 447, 449, 539, 568-70, 572-582, at 9-10, 16-18, 27-29, 48, 60-66, 100, 108, 111, 117, 120-21, 157-58, 167-71).

202. The United States argues that, contrary to Jemez Pueblo's assertions, the trial does not establish that the Pecos Indians were a Jemez Pueblo clan, but rather that Jemez Pueblo and Pecos Pueblo were entirely distinct before 1838, and still maintain a separate culture within Walatowa. See United States' Br. at 128-29 (citing Jemez Pueblo's Proposed Findings ¶¶ 256-57, 383, at 94, 126; United States' Proposed Findings ¶¶ 282-85, 454, at 74, 123)

203. The United States argues that Anschuetz provided the Court with extensive and detailed accounts of the importance of the Valles Caldera, including many specific locations throughout the Preserve lands, to many Tribes and Pueblos based on all available historic, ethnographic, and archaeological evidence. See United States' Br. at 129 (citing United States' Proposed Findings ¶¶ 8-14, 31, 302, 304-06, 308, 332-33, 336, 359-60, 363-65, 367, 369, 373, 379-82, 384, 389, 417, 421, 426, 452, 504, 520-21, 528, 549, 574, 577, 581, at 4-7, 11-12, 78-82, 91-94, 99-108, 113-15, 122-23, 146, 150-54, 161, 168-70).

204. The United States argues that Steffen's analysis examined American Indians' Jemez Mountains obsidian use throughout prehistory to provide the context needed to demonstrate that Jemez Pueblo's obsidian use was neither extraordinary nor dominant. See United States' Br. at 130-32 (citing United States' Proposed Findings ¶¶ 30-31, 555-56, at 11, 163; Jemez Pueblo's

Proposed Findings ¶¶ 43, at 15-16). The United States adds that, although Gauthier cited to an article that Steffen wrote in 2017, Gauthier did not adopt Steffen's conclusions from her expert report but instead for his report conducted his own independent and objective analysis, which, according to the United States, shows that diverse people used the Valles Caldera for many centuries until private owners substantially altered such use. See United States' Br. at 132 (citing Nov. 8 Tr. at 2401:18-2402:4 (Gauthier); id. at 2464:1-12 (Gauthier); Jemez Pueblo's Proposed Findings ¶ 50, at 19-20).

205. The United States argues that Fogleman's Least Cost Path analysis lacks credibility, because Fogleman has never used it to determine an area's dominant user, and because it does not consider land cover's impact or specific Tribal use. See United States' Br. at 132 (citing United States' Proposed Findings ¶¶ 522, at 151; Jemez Pueblo's Proposed Findings ¶¶ 478-79, at 146). Moreover, the United States continues, Fogleman's analysis does not consider non-Jemez Pueblo ancestral villages that are closer to the Valles Caldera than Jemez Pueblo's ancestral villages, nor does his analysis account for the fact that current Pueblos are closer in both straight-line distance and travel time to portions of the Valles Caldera other than Redondo Peak. See United States' Br. at 133 (citing United States' Proposed Findings ¶¶ 522-26, at 151-53; Jemez Pueblo's Proposed Findings ¶¶ 478-79, at 146).

206. The United States argues that Fergusons' analysis exaggerates Jemez Pueblo's Valles Caldera use, because it does not consider whether Jemez Pueblo members still use the sites that Ferguson identifies in his cultural atlas, or how frequently Jemez Pueblo members hunt or gather plants within the Valles Caldera, or how frequently other Tribes use the Valles Caldera. See United States' Br. at 133-34 (citing United States' Proposed Findings ¶¶ 85, 87, 89, 111, 113,

221-23, 225, 238-41, 586, 591-93, at 25-26, 30-31, 60-61, 64-65, 71-72; Jemez Pueblo's Proposed Findings ¶¶ 221, 241, 280, 403-04, at 84, 89, 102, 131-32).

207. The United States argues that Jemez Pueblo's Proposed Findings regarding Veronica Tiller's broad statement that "reverence of more than one tribe towards significant terrain features . . . does not detract from another tribe's claims of exclusive use or occupancy of the territory in which such features are found," ignores the evidence that multiple Tribes' association with the Valles Caldera included actual use, including the Jicarilla Apache Nation's activities within the Valles Caldera, of which Tiller has particular expertise. United States' Br. at 135 (quoting Jemez Pueblo's Proposed Findings ¶ 545, at 163; and citing United States' Proposed Findings ¶¶ 137-39, 141, 301, 444, 548, 549, at 36-38, 78, 119-20, 161).

208. The United States argues that Jemez Pueblo attempts to stretch García y Griego's testimony beyond his limited opinion regarding Jemez Pueblo's ancestral Valles Caldera use to argue instead that Jemez Pueblo exclusively used and dominated those lands, which according to the United States, not only ignores García y Griego's admission that other Pueblos historically used the Valles Caldera but also his general ignorance regarding the specifics of such use, which the United States describes. See United States' Br. at 135-39 (citing United States' Proposed Findings 2, 4-7, 9-10, 12, 39-50, 54-56, 320, 469, 473, at 1-6, 14-18, 88, 130-31; Jemez Pueblo's Proposed Findings 359, 365, 371, 377-78, 522, at 120-23, 125, 156-57).

209. The United States argues that Jemez Pueblo's reliance on Whatley's testimony ignores Whatley's bias toward Jemez Pueblo, a community where Whatley worked for seventeen years and to which Whatley believes he is personally indebted, which, according to the United States, compelled Whatley to contradict at the trial his prior conclusions regarding other Tribes'

Valles Caldera use so as to advance Jemez Pueblo's aboriginal title claim. See United States' Br. at 139-40 (citing Jemez Pueblo's Proposed Findings ¶¶ 65, 312, at 27-28, 109; United States' Proposed Findings ¶¶ 34, 471-73, 475, at 13, 131-33). The United States adds that, standing alone, Whatley's ancestral lands work has limited evidentiary value, because Whatley exclusively relied on Jemez Pueblo members attempting to piece together their ancestors' centuries-old activities, and because Whatley's maps do not depict other Tribes' understanding of Jemez Pueblo's boundaries, which cannot support Jemez Pueblo's arguments regarding dominance or exclusivity. See United States' Br. at 140-41 (citing United States' Proposed Findings ¶ 473, at 132). Moreover, the United States continues, Whatley's methodology indicates that certain sites labeled "ancestral Puebloan" have a Tewa or Keres affiliation based on ceramics analysis, which, according to the United States, shows that Jemez Pueblo recognizes that other Pueblos use or used portions of the Valles Caldera either exclusively or jointly with Jemez Pueblo. See United States' Br. at 141-42 (citing Jemez Pueblo's Proposed Findings ¶¶ 51, 259, 320, at 20, 96, 111; United States' Proposed Findings ¶¶ 10, 20-22, 471, 474, 539, at 5, 9-10, 131-33, 157-58).

210. The United States argues that Jemez Pueblo misstates the record to argue that Kelley's opinions in her expert report are more credible than Anschuetz' opinions, because, according to the United States, although Kelley and Anschuetz have occasionally collaborated and corresponded during the past two decades, Anschuetz, in reaching his conclusion that the Valles Caldera is a commons, independently reviewed and evaluated Kelley's sources, including sources which demonstrate that the Navajo Nation maintains a deep connection to the Valles Caldera, and that Navajo Nation members historically traversed and gathered obsidian from the Valles Caldera, and lived on a ridge bordering the Valles Caldera's Valle Toldeo in the early twentieth century.

See United States' Br. at 142-44 (citing Jemez Pueblo's Proposed Findings ¶¶ 35-36, 546, at 12, 163-64; United States' Proposed Findings ¶¶ 56, 313, 445-46, 571, at 18-19, 83-84, 120, 168).

211. The United States argues that Gauthier's knowledge of and familiarity with ancestral Puebloan sites gleaned from four decades of fieldwork in the American southwest is superior to Liebmann's experience, and further criticizes Liebmann for spending merely one day inspecting and analyzing the Valles Caldera's ceramics collection, during which Liebmann personally examined sherds from only one site, according to the United States, and for otherwise relying on Roney's analysis and conclusions regarding a given sherd's affiliation. See United States' Br. at 144-45 (citing Jemez Pueblo's Proposed Findings ¶¶ 45-46, at 16-18; United States' Proposed Findings ¶¶ 15-16, 535-36, at 7-8, 156). The United States adds that Jemez Pueblo mischaracterizes Gauthier's testimony regarding the presence of some Jemez Pueblo pottery sherds at sites affiliated with non-Jemez Pueblo pottery, because, according to the United States, Gauthier never testified that "archaeologists do not find Jemez Black-on-White at a non-Jemez site," but instead explains that Jemez Pueblo pottery typically is not found at a Tewa-affiliated site, because those two groups did not engage in trade before the Pueblo Revolt, and that archeologists therefore assign a Tewa affiliation to sites containing pre-Revolt Tewa ceramics. United States' Br. at 144-45 (citing Jemez Pueblo's Proposed Findings ¶¶ 46, 433, 492, at 17-18, 138, 148-49; United States' Proposed Findings ¶¶ 18-25, 350, 532-33, 539-40, at 8-10, 97, 155-58). The United States repeats its argument that Gauthier concludes at the trial that the Valles Caldera ceramics record shows that Keres and Tewa people predominantly used the southeast and south central portions of the Valles Caldera, that ancestral Jemez Pueblo members predominately used the Valles Caldera's extreme southwestern corner, and that all three language groups used the Valles

Caldera's northern portions, which establishes, according to the United States, that Jemez Pueblo did not dominate the Valles Caldera. See United States' Br. at 147-48 (citing Jemez Pueblo's Proposed Findings ¶ 490, at 148; United States' Proposed Findings ¶¶ 22-25, 532, 539, at 9-10, 155, 157).

13. Closing Arguments.

212. On May 7, 2019, the Court heard closing arguments for the bench trial. See Draft Transcript of Hearing at 35:24-36:10 (taken Oct. 11, 2018)("May 7 Tr.").[190] Jemez Pueblo first discussed aboriginal title generally and then distinguished Anglo land use, which, according to Jemez Pueblo, is primarily a means to support commerce, from American Indian land use, which imparts to land great spiritual significance. See May 7 Tr. at 4:15-6:11 (West). Jemez Pueblo next discussed cultural differences among Tribes. See May 7 Tr. at 6:12-7:1 (West). Jemez Pueblo then argued that its aboriginal title pre-dates Western Europe's and United States' first contact with American Indians pursuant to legal doctrine that European and American law recognizes. See May 7 Tr. at 7:2-8:2 (West). Jemez Pueblo discussed the elements that courts require Tribes to prove to succeed in an aboriginal title claim. See May 7 Tr. at 8:2-10 (West). Jemez Pueblo asserted that the trial provided the Court with evidence sufficient to establish that Jemez Pueblo has used the Valles Caldera for centuries. See May 7 Tr. at 8:11-9:3 (West).

213. The Court asked Jemez Pueblo to reconcile its assertion that it was the Valles Caldera's dominant user with the "extensive evidence" which shows that other Tribes were using

[190]The Court's citations to the transcript of the hearing refer to the court reporter's original, unedited version. Any final transcript may contain slightly different page and/or line numbers.

the Valles Caldera at the same time. May 7 Tr. at 9:9-10:1 (Court). Jemez Pueblo responded that the evidence before the Court indicates both that Jemez Pueblo was the Valles Caldera's dominant user and also that Jemez Pueblo permitted other Tribes Valles Caldera use. See May 7 Tr. at 10:2-5 (West). The Court replied that it does not see in the record evidence that other Tribes requested permission to use the Valles Caldera from Jemez Pueblo. See May 7 Tr. at 10:6-12 (Court). Jemez Pueblo argued that long-standing "Tribal customs" allow for "limited traditional practices," "similar to a well established easement or a license or a conditional license upon which an owner has said [']yes . . . [you] can come onto my land and you can gather this plant or in certain cases game for traditional uses. And if it's not traditional uses we object to it.[']" May 7 Tr. at 10:16-11:1 (West). Jemez Pueblo cited an incident on Redondo Peak as an example of Jemez Pueblo objecting to nontraditional use. See May 7 Tr. at 11:2-4 (West). The Court expressed its reluctance to say whether one Tribe's Valles Caldera use is traditional or nontraditional, which the Court analogized to making a decision regarding a given Tribe's religion. See May 7 Tr. at 11:7-25 (Court). Jemez Pueblo responded that Tribes can distinguish traditional from nontraditional use and "know very well the difference in those customs." May 7 Tr. at 12:2-16 (West). The Court asked for Jemez Pueblo's top three permissive use examples, and Jemez Pueblo argued that the archeological record and contemporary witness testimony, specifically Cochiti Pueblo member Suina's testimony regarding gathering wood from the Valles Caldera, evidence permissive use. See May 7 Tr. at 12:19-13:22 (Court, West). The Court asked for one example where a Tribe recognized Jemez Pueblo's aboriginal title and expressly asked permission to use the Valles Caldera, and Jemez Pueblo asserted that such permission need not be explicit. See May 7 Tr. at 14:2-9 (West). The Court stated that it would not necessarily hold Jemez Pueblo to an explicit-

permission standard, and Jemez Pueblo averred that the Tribal resolutions confirm permissive use. See May 7 Tr. at 14:10-15:12 (Court, West).

214. The Court expressed that, in the Court's opinion, the Tribal resolutions indicate limited support for Jemez Pueblo, which "broke down" when such support conflicted with Tribes' self-interests. May 7 Tr. at 15:17-16:13 (Court). Jemez Pueblo disputed the Court's assessment and argued that Santa Clara Pueblo is, in Jemez Pueblo's opinion, the only Tribe that shifted its position. See May 7 Tr. at 17:10-19:12 (West).

215. Jemez Pueblo argued that the United States seeks to revise aboriginal title law and asks the Court to ignore longstanding precedent which dictates that only Congress can take aboriginal lands from American Indians. See May 7 Tr. at 19:18-21:18 (West). Moreover, argued Jemez Pueblo, the evidence that the United States presents regarding Valles Caldera use after Spanish arrival is irrelevant unless such evidence speaks to abandonment or to Congressional action, which the United States' evidence, according to Jemez Pueblo, does not. See May 7 Tr. at 21:19-22:5 (West).

216. Jemez Pueblo summarized the evidence that it presented at trial, which includes testimony from Jemez Pueblo members, scientists, academics, and European and American written records. See May 7 Tr. at 22:6-26:21 (West). Jemez Pueblo added that the United States has not presented evidence to refute Jemez Pueblo's continuous Valles Caldera use for many centuries and instead asks the Court to create additional precedent that the law does not recognize. See May 7 Tr. at 26:22-27:9 (West).

217. Jemez Pueblo summarized Ferguson's testimony and expert report, which, according to Jemez Pueblo, evinces a rigorous methodology that stands in contrast to Anschuetz'

broad generalizations and failure to limit his analysis to the Valles Caldera proper. See May 7 Tr. at 27:10-29:5.

218. Jemez Pueblo summarized Liebmann's testimony regarding the archeological record, and the Court asked Jemez Pueblo to refresh the Court's memory whether Liebmann focused exclusively on Jemez Pueblo archeology or studied other Tribes as well. See May 7 Tr. at 29:23-30:4 (Court). Jemez Pueblo responded that Liebmann opined regarding dominant use and exclusive use as to ceramics, obsidian, and [redacted], and thereafter summarized for the Court Liebmann's conclusions as to each category. See May 7 Tr. at 30:5-32:10 (West).

219. Jemez Pueblo summarized Gauthier's testimony, which, despite ignoring and statistically manipulating the evidence, according to Jemez Pueblo, nevertheless supports Liebmann's conclusions regarding Jemez Pueblo's dominance over the Valles Caldera's obsidian quarries, among other sites. See May 7 Tr. at 32:11-33:22 (West).

220. Jemez Pueblo summarized García y Griego's testimony regarding activities in the Jemez Mountains during Spanish contact and thereafter, and argued that, consistent with the archeological evidence, the historical evidence also supports Jemez Pueblo's assertion that its ancestral domain encompasses the Valles Caldera. See May 7 Tr. at 33:22-35:3 (West).

221. Jemez Pueblo summarized Whatley's testimony and mapping project, which, according to Jemez Pueblo, provide the Court with credible and consistent evidence regarding Jemez Pueblo's aboriginal boundaries. See May 7 Tr. at 35:4-36:22 (West).

222. Jemez Pueblo summarized Fogleman's testimony regarding the Valles Caldera geography and Jemez River watershed, which, according to Jemez Pueblo, traverses the Jemez

Pueblo's ancestral domain, passing through historic villages and Walatowa, and in this way provides a natural boundary similar to how the Santa Clara Creek watershed provides Santa Clara Pueblo's natural boundary. See May 7 Tr. at 36:22-38:14 (West).

223. Jemez Pueblo asserted that the numerous Banco Bonito fieldhouses and large, ancestral Jemez Pueblo villages near the Valles Caldera support Jemez Pueblo's exclusivity arguments, and are, according to Jemez Pueblo, the only credible evidence of architecture within the Valles Caldera, [redacted]. See May 7 Tr. at 38:15-40:6 (West).

224. Jemez Pueblo made arguments regarding longstanding agreements and relationships among the Pueblos as to joint, amicable, and permissive use. See May 7 Tr. at 40:8-41:2 (West).

225. Jemez Pueblo again discussed Fogleman's geospatial analysis, which it argued supports Liebmann's conclusion regarding Jemez Pueblo's dominant Valles Caldera use, and contrasted Fogleman's analysis with Gauther's, who, according to Jemez Pueblo, ignored or disregarded evidence in the ceramics record as to Jemez Pueblo's Banco Bonito use. See May 7 Tr. at 41:2-42:7 (West). Nevertheless, Jemez Pueblo argued, Gauthier's conclusions support Jemez Pueblo's dominant use assertions. See May 7 Tr. at 42:12-16 (West).

226. Jemez Pueblo criticized Steffen's research and conclusions on Valles Caldera obsidian for focusing on areas outside the Valles Caldera and for not studying obsidian found at ancestral Jemez Pueblo villages. See May 7 Tr. at 42:20-43:11 (West).

227. Jemez Pueblo elaborated on its permissive use arguments and analogized other Tribes' Valles Caldera use to Jemez Pueblo visiting Mount Taylor[191] or Sandia Peak,[192] or to tourists visiting Notre-Dame de Paris in France to illustrate that individuals or groups may consider a given site sacred while not having a legally cognizable property interest in the site. See May 7 Tr. at 44:5-21 (West). Jemez Pueblo directed the Court to testimony from Cochiti Pueblo and Taos Pueblo as evidence that Tribes permit each other to use aboriginal land while understanding that such use does not affect their title to the property. See May 7 Tr. at 44:21-46:10 (West). Jemez Pueblo added that the Tribal resolutions codify the Tribes' permissive land use for traditional, customary purposes. See May 7 Tr. at 46:11-47:25 (West).

228. Jemez Pueblo asserted that, even if the Court considers relevant evidence of Valles Caldera use after Spanish arrival, the record, according to Jemez Pueblo, still supports that Jemez Pueblo is the Valles Caldera's dominant user, and highlighted the Navajo raids which, according to Jemez Pueblo, evince that Jemez Pueblo fought and repelled the Navajo Nation from the Valles Caldera. See May 7 Tr. at 47:9-24 (West). The Court expressed that the evidence indicates that the Navajo Nation used the Valles Caldera as a crossroads, and Jemez Pueblo responded that,

[191]"Mount Taylor (Navajo: Tsoodził) is an inactive stratovolcano in northwest New Mexico, northeast of the town of Grants. It is the high point of the San Mateo Mountains and the highest point in the Cibola National Forest. It was named in 1849 for then president Zachary Taylor." Mount Taylor (New Mexico), Wikipedia, https://en.wikipedia.org/wiki/Mount_Taylor_(New_Mexico)(last visited July 17, 2019).

[192]Sandia Crest is the highest point in the Sandia Mountains, which is "a mountain range located in Bernalillo and Sandoval counties, immediately to the east of the city of Albuquerque in New Mexico in the southwestern United States. The range is largely within the Cibola National Forest, and part of the range is protected as the Sandia Mountain Wilderness." Sandia Mountains, Wikipedia, https://en.wikipedia.org/wiki/Sandia_Mountains (last visited July 17, 2019)

although the Court heard testimony regarding Navajo Nation trails through the Valles Caldera, such use does not affect Jemez Pueblo's aboriginal title, because the Navajo Nation used the trails to raid other Pueblos. See May 7 Tr. at 47:25-48:15 (Court, West).

229. Jemez Pueblo argued that no Jemez Pueblo members testified to seeing members from other Pueblos use the Valles Caldera, aside from the single incident involving Zia Pueblo in 2001. See May 7 Tr. at 48:18-22 (West). Jemez Pueblo added that both Whatley and Dunigan also testified to never seeing members from Tribes other than Jemez Pueblo use the Valles Caldera. See May 7 Tr. at 48:22-49:22 (West).

230. Jemez Pueblo argued that its numerous Valles Caldera access requests prove continuous use, that most Tribes whom the United States asserts have an interest in the Valles Caldera have never requested access, and that the remaining Tribes have made only sporadic and infrequent requests. See May 7 Tr. at 50:1-51:7 (West). Such demonstrated, continuous use, contended Jemez Pueblo, is the reason that Valles Caldera staff repeatedly have requested Jemez Pueblo -- but not other Tribes -- to assist with numerous activities such as speaking to field schools and offering preliminary opinions regarding archeological sites. See May 7 Tr. at 51:8-23 (West).

231. Jemez Pueblo argued that, because it has established aboriginal title, the only question left for the Court to consider is whether Congress extinguished Jemez Pueblo's aboriginal title, evidence of which, according to Jemez Pueblo, the Court has not seen. See May 7 Tr. at 52:18-54:2 (West).

232. Jemez Pueblo disagreed with the United States' theory that non-Indians' substantial interference can effect aboriginal title extinguishment and disputed the legal basis for the Court requiring that such interference could effect title extinguishment when tied to Congressional

action. See May 7 Tr. at 54:3-59:6 (West, Court). Jemez Pueblo argued that, regardless its disagreement with the United States and the Court, the substantial interference that the United States cites is not only not tied to a congressional act, but is also not substantial interference, because multiple Jemez Pueblo witnesses testified that the Valles Caldera's private owners permitted Jemez Pueblo to continue their traditional practices. See May 7 Tr. at 59:8-61:4 (West).

233. Jemez Pueblo argued that congressional action regarding the Valles Caldera does not indicate that Congress authorized substantial interference, but rather that Congress merely acted to approve and sanction prior sovereign's land grants, and added that the Tenth Circuit has already rejected the United States' argument that the 1860 grant to the Baca heirs extinguished Jemez Pueblo's aboriginal title. See May 7 Tr. at 61:4-62:10 (West).

234. Jemez Pueblo contested the United States' assertion that Congress extinguished Jemez Pueblo's aboriginal title when it purchased the Valles Caldera in 2000, and through subsequent legislation in 2005 and 2015, because those actions neither restricted Jemez Pueblo's traditional uses nor prevented Jemez Pueblo from using the land according to its predilections. See May 7 Tr. at 62:11-64:6 (West).

235. Jemez Pueblo argued that the United States, in addition to asking the Court to create new law, has taken evidence out of context, and alternately ignored and trivialized Jemez Pueblo's Valles Caldera use, specifically by arguing that Jemez Pueblo has manufactured and staged evidence. See May 7 Tr. at 64:7-66:7 (West). As support for its position that the United States is mischaracterizing the evidence in this case, Jemez Pueblo cited the United States' assertion that, in the twentieth century, Navajo hogans were located along the ridge bordering the Valle Toldeo in the Valles Caldera's northeast section. See May 7 Tr. at 66:9-67:1 (West). Similarly, Jemez

Pueblo argued that the United States frequently equates Tribes' Jemez Mountains use with Tribes' Valles Caldera use, and thereby stretches its facts to reach broad and unsupported conclusions. See May 7 Tr. at 67:1-67:13 (West).

236. Jemez Pueblo asked the Court not to give the same weight to broad statements that Pueblos made at listening sessions with Valles Caldera staff and management, and instead to weigh more heavily Jemez Pueblo's statements that describe actual and continuous Valles Caldera use. See May 7 Tr. at 67:18-13 (West).

237. Jemez Pueblo argued that the United States manipulated its witnesses, for example, by withholding Whatley's GIS information from Gauthier. See May 7 Tr. at 67:24-68:19 (West).

238. Jemez Pueblo discussed its migration history and insisted that, through prayers, songs, and dances, which Jemez Pueblo members have passed down through generations, the Valles Caldera plays a central role in that history, and concluded by asking the Court to recognize its aboriginal title to those lands. See May 7 Tr. at 68:20-69:25 (West).

239. The Court expressed that it is struggling most with the question whether Jemez Pueblo ever had aboriginal title to the Valles Caldera, because the archeological and ethnological evidence received at trial indicates the many Tribes and indigenous peoples who predate modern Tribes were using the Valles Caldera for millennia. See May 7 Tr. at 70:1-22 (Court). Jemez Pueblo replied that, although the lack of written evidence presents a challenge for the Court, the record nonetheless supports Jemez Pueblo's aboriginal title claim, because courts have relied on archeological and ethnological evidence in other aboriginal title cases. See May 7 Tr. at 70:23-71:8 (West). The Court replied that the absence of written documentation is not a bar to Jemez Pueblo's claim, and Jemez Pueblo added that the careful manner through which Jemez Pueblo

members pass down their oral traditions preserves the information's accuracy and credibility. See May 7 Tr. at 71:9-72:21 (Court, West).

240. Jemez Pueblo reminded the Court that the preponderance of the evidence standard governs the case, and asserted that a preponderance of the ceramics, obsidian, historical, and geographic evidence proves Jemez Pueblo's Valles Caldera use and occupancy. See May 7 Tr. at 72:21-73:4 (West).

241. The United States began its argument by asserting three points: first, that the Valles Caldera has "been a tribal commons used by many and . . . exclusive to none," and thus has never been Jemez Pueblo's exclusive domain; second, that, pursuant to Congress' 1860 grant to the Baca heirs, the Valles Caldera's private owners substantially interfered with Jemez Pueblo's Valles Caldera use; and third, that Congress recognized the Valles Caldera's nonexclusive nature when it specifically provided for Santa Clara Pueblo, San Ildefonso Pueblo and other federally recognized Tribes in the Valles Caldera's management plan. May 7 Tr. at 74:4-15 (Marinelli).

242. The United States asserted that the physical evidence presented at trial defeats Jemez Pueblo's suggestion that it was the Valles Caldera's exclusive user, because such evidence proves that, like Jemez Pueblo, other Pueblos had ancestral villages near the Valles Caldera. See May 7 Tr. at 74:16-23 (Marinelli).

243. The Court asked the United States to address Jemez Pueblo's contention that experts predominantly associate the ceramics evidence with Jemez Pueblo, and the United States responded that such evidence is almost exclusively confined to the Banco Bonito. See May 7 Tr. at 74:24-75:23 (Court, Marinelli). The Court then asked the United States whether the Court properly can find that Jemez Pueblo has aboriginal title merely to a portion of the Valles Caldera,

and the United States responded that, although the Court legally could make such a finding, the facts do not support it, because, according to the United States, Jemez Pueblo never farmed the Banco Bonito continuously and has not farmed the Banco Bonito since 1650, which the United States insisted is proof both that Jemez Pueblo never had and did not maintain aboriginal title to that area. See May 7 Tr. at 75:24-76:20 (Court, Marinelli). Regarding title establishment, the United States argued that Jeremy Kulisheck, whom Liebmann acknowledged as an expert on Banco Bonito archeology, concluded in 2003 that Jemez Pueblo likely had not farmed the Banco Bonito since 1425, and, therefore, Jemez Pueblo did not have aboriginal title pursuant to Jemez Pueblo's aboriginal title establishment theory as the United States understands it, which requires use when the Spanish arrived in 1541. See May 7 Tr. at 76:21-77:23 (Marinelli, Court). The United States argued that, unlike fee simple title, aboriginal title is not fixed, but can shift over time and therefore must be maintained; hence, according to the United States, Jemez Pueblo must prove that it had aboriginal title in 2000, the date on which Jemez Pueblo insists that a taking occurred. See May 7 Tr. at 78:1-79:7 (Court, Marinelli). The United States added that Jemez Pueblo has not occupied Hot Springs Pueblo, which, according to the United States, is the closest village to the Valles Caldera, since 1500, and has not occupied Unshagi and Nanishagi since before 1650, when Jemez Pueblo alleges, according to the United States, that Jemez Pueblo ceased farming the Banco Bonito. See May 7 Tr. at 79:8-16 (Marinelli).

244. The United States argued that the Spanish eliminated Jemez Pueblo's interest in the Banco Bonito, and the Valles Caldera as a whole, when they removed Jemez Pueblo to Walatowa and forced it to remain there. See May 7 Tr. at 79:17-80:5 (Marinelli).

245. The United States argued that, during the ICC litigation in the 1950s and again in the 1980s, Jemez Pueblo conceded that it used the Valles Caldera jointly with Santa Ana Pueblo and Zia Pueblo. See May 7 Tr. at 80:5-15 (Marinelli).

246. The United States argued that Zia Pueblo did not merely wander through areas within the Valles Caldera, including the Banco Bonito, but instead engaged in purposeful, religiously motivated travel before and after Spanish contact in 1541. See May 7 Tr. at 80:16-81:2 (Marinelli). The Court asked why traveling through an area is significant, and the United States directed the Court to Wichita Indian Tribe v. United States, 696 F.2d 1378, 1385 (Fed. Cir. 1983), for the proposition that, where adverse Tribes travel through land for hunting purposes or wanders over land, no single Tribe can successfully assert ownership, which is the case here, according to the United States, because Zia Pueblo's travel and use was never subject to Jemez Pueblo's permission. See May 7 Tr. at 81:3-82:5 (Court, Marinelli).

247. The United States reminded the Court that the Jicarilla Apache Nation claimed the entire Valles Caldera during its ICC litigation, asserted that it worshiped on Redondo Peak, peeled bark from trees within the Valles Caldera, and, according to Jemez Pueblo's own admission, made life difficult for Jemez Pueblo from the 1600s onward, which, according to the United States, is further evidence that Jemez Pueblo never dominated the area. See May 7 Tr. at 82:5-24 (Marinelli).

248. The United States argued that Anschuetz' maps depict the distance from ancestral Pueblos to Cerro del Medio, which, according to the United States, is for many Tribes culturally significant, and show that Pueblos larger than Jemez Pueblo are closer than Jemez Pueblo to key areas with the Valles Caldera. See May 7 Tr. at 83:25-84:14 (Marinelli). The United States added

that these Pueblos were occupied between 1300 and 1700 C.E., and that two such Pueblos contained 3,200 rooms and are located within a few miles of the Valles Caldera's boundaries. See May 7 Tr. at 83:15-84:1 (Court, Marinelli). The Court inquired why Anschuetz chose that specific date range, and the United States responded that Anschuetz adopted the date range from Fogleman's work, which, according to the United States, excluded several ancestral Pueblos that Anschuetz and Gauthier noted. See May 7 Tr. at 84:4-15 (Court, Marinelli).

249. The United States argued that both Anschuetz and Liebmann provided testimony regarding Jicarilla Apache settlements near the Valles Caldera, and that Liebmann specifically acknowledged that Jicarilla Apache members collected Cerro del Medio obsidian before camping at a site used during the turn of the twentieth century. See May 7 Tr. at 84:21-85:7 (Marinelli).

250. The United States argued that the archeologists have found Valles Caldera obsidian at many Pueblo sites located to the Valles Caldera's east and southeast, and suggested that Liebmann disregarded these sites because such evidence would undercut his conclusion that Jemez Pueblo used Valles Caldera obsidian to a degree far greater than any other Pueblo. See May 7 Tr. at 85:8-86:19 (Marinelli).

251. The United States argued that the Pueblos of Jemez, Zia, and Santa Ana's joint claim before the ICC independently defeats Jemez Pueblo's claim in this case, because, during the ICC litigation, then-Jemez Pueblo governor Pat Toya asserted that the three Pueblos share Redondo Peak, with the more eastern Pueblos accessing the mountain from the east and the more western Pueblos accessing the mountain from the west. See May 7 Tr. at 86:20-88:11 (Marinelli). The Court asked whether the United States consideres Toya's statement accurate or merely an attempt to state a large claim area before the ICC, and the United States responded that Toya's

statement supports the United States' position that the Valles Caldera has always been a commons with many Pueblos asserting multiple and sometimes inconsistent views regarding land ownership and use. See May 7 Tr. at 88:12-89:1 (Court, Marinelli).

252. The Court asked whether the ICC or other courts have used the phrase "Tribal commons," and expressed reluctance about inventing a term, and the United States responded that the phrase is implicit in the legal standard that the United States Court of Appeals for the Federal Circuit articulated in Wichita Indian Tribe v. United States, and that San Ildefonso Pueblo used the phrase while lobbying Congress in 1997 and 1998. May 7 Tr. at 89:2-17 (Court, Marinelli). The United States suggested that the Court consider the phase to indicate merely that Jemez Pueblo has not met its burden, because the phrase connotes that Jemez Pueblo's Valles Caldera use was not exclusive, dominant, or permissive. See May 7 Tr. at 89:18-25 (Marinelli). The Court asked whether the phrase is inconsistent with the United States' theory, because, from the Court's perspective, "Tribal commons" indicates that many people possess the land, and the United States is arguing that many Tribes used and use it, but no single Tribe possesses it, May 7 Tr. at 90:1-9 (Court), to which the United States responded that merely using land is insufficient to establish aboriginal title; "plaintiff has to dominate an area, and that is just not the case here," May 7 Tr. at 90:10-16 (Marinelli).

253. The United States argued that Santa Clara Pueblo's, San Ildefonso Pueblo's, and Jicarilla Apache Tribe's separate ICC claims also alleged that each Tribe's aboriginal territory either extended into or encompassed the entire Valles Caldera, and that Ferguson's expert report recognizes that Santa Clara Pueblo had grazing lands with the Valles Caldera. See May 7 Tr. at 90:17-91:22 (Marinelli).

254. The United States argued that Liebmann wrote an article in which he says that Jicarilla Apache and Navajo Nation members' presence in the Valles Caldera decreased Jemez Pueblo's access to Cerro del Medio obsidian. See May 7 Tr. at 91:23-92:17 (Marinelli).

255. The United States argued that "dominance is a function of population" and that Jemez Pueblo's population, which, according to the United States, was between 100 and 200 individuals in the 1700s, was too small to dominate any land, particularly while residing in Walatowa twenty to twenty-five miles from the Valles Caldera. May 7 Tr. at 92:17-93:14 (Marinelli).

256. The United States argued that eighteen Pueblos presented evidence that they use the Valles Caldera, particularly Redondo Peak, and directed the Court to Santa Clara Pueblo member Jose Lucero's testimony that, without Redondo Peak, Santa Clara Pueblo's four cardinal directions would be incomplete. See May 7 Tr. at 93:15-24 (Marinelli).

257. The United States argued that Santa Clara Pueblo and Zia Pueblo opposed the Valles Caldera geothermal development project, because it threatened their ability to use the Valles Caldera, which Ellis contemporaneously chronicled along with many other Pueblos' connection to those lands. See May 7 Tr. at 94:23-96:5 (Marinelli).

258. The United States argued that, while serving as Jemez Pueblo's anthropologist, Ellis wrote that the Pueblos of Jemez, Zia, and Santa Ana considered including the Valles Caldera in their ICC claim, but ultimately decided against it, because other Rio Grande Pueblos' connections to those lands would preclude Jemez Pueblos' ability to show either exclusive or dominant use. See May 7 Tr. at 96:5-23 (Marinelli).

259. The United States argued that, even if Jemez Pueblo could prove that it is the Valles Caldera's predominate user, which, according to the United States, it cannot, such proof is insufficient to establish aboriginal title, because the standard requires that Jemez Pueblo exercise complete dominion over other Tribes, that is, dominion sufficient to prevent through force other Tribes from using the Valles Caldera, which, according to the United States, Jemez Pueblo could not do given that other Tribes were more numerous than Jemez Pueblo and had unimpeded access to the Valles Caldera. See May 7 Tr. at 97:1-20 (Marinelli). The United States repeated its argument that Jemez Pueblo conceded at trial that other Tribes made the Valles Caldera a dangerous place for Jemez Pueblo, which, according to the United States, undermines Jemez Pueblo' ability to exercise complete dominion. See May 7 Tr. at 97:20-98:3 (Marinelli).

260. The United States argued that, throughout history, the Tewa Pueblos, Jemez Pueblo, Jicarilla Apache Nation, and Navajo Nation have had adverse relations that prevented significant interaction, including trade, and at times escalated to open hostilities; for example, the 1863 conflict wherein the Pueblos of Santa Clara and San Ildefonso joined with the United States to recover stolen cattle from Jemez Pueblo and the Navajo Nation, evidences, according to the United States, that other Tribes not only accessed the Valles Caldera without first seeking Jemez Pueblo's permission, but also that other Tribes dominated Jemez Pueblo. See May 7 Tr. at 97:24-99:3 (Marinelli).

261. The United States argued that the ceramic, obsidian, geographic, anthropologic, and testimonial evidence all support the United States' position that Tewa and Kewa Pueblos, and other Tribes, used the Valles Caldera regardless whether Jemez Pueblo was opposed to their presence and activities. See May 7 Tr. at 99:3-23 (Marinelli). The United States added that the record does

not contain evidence that any Pueblo asked Jemez Pueblo for permission to enter the Valles Caldera, a fact which Jemez Pueblo conceded, according to the United States. See May 7 Tr. at 99:23-100:5 (Marinelli).

262. The United States argued that pre-litigation statements from other Pueblos, for example, the Pueblos of San Ildefonso and Santa Clara, indicate that the Pueblos proximate to the Valles Caldera do not believe that the Valles Caldera belongs to Jemez Pueblo, and that such statements are more credible than the recent resolutions that Jemez Pueblo procured for this litigation. See May 7 Tr. at 100:5-101:1 (Marinelli).

263. The United States asserted that Jemez Pueblo finds other Pueblos' Redondo Peak use offensive, but, according to the United States, the record establishes that other Pueblos historically used and continue to use Redondo Peak absent Jemez Pueblo's consent or approval. See May 7 Tr. at 101:1-102:13 (Marinelli).

264. The United States disputed how Jemez Pueblo characterized Suina's testimony that Cochiti Pueblo supports Jemez Pueblo's Valles Caldera claim, because, according to the United States, Jemez Pueblo did not disclose to Cochiti Pueblo that Jemez Pueblo objects to Cochiti Pueblo's Redondo Peak use, and such an omission likely affects Cochiti Pueblo's support for Jemez Pueblo in this litigation. See May 7 Tr. at 102:14-103:4 (Marinelli).

265. The United States argued that Santa Clara Pueblo distinguishes between its exclusive use boundaries and its joint use boundaries, on which the Court heard extensive evidence from former Santa Clara Pueblo Governor Michael Chavarria, who testified to accessing the Valles Caldera's joint use areas for traditional purposes. See May 7 Tr. at 103:4-17 (Marinelli).

266. The United States disputed Jemez Pueblo's assertion that Santa Clara Pueblo does not use the Valles Caldera, because, in addition to Chavarria's testimony, the record includes evidence that Santa Clara Pueblo members snuck into the Valles Caldera during the private ownership period and thereafter received oral permission. See May 7 Tr. at 103:18-104:20 (Marinelli).

267. The United States argued that Navajo Nation members historically camped in the Valles Caldera and presently consider it a "neutral zone" similar to Anschuetz' Tribal commons conception. May 7 Tr. at 104:25-105:8 (Marinelli). The United States added that Liebmann admitted that Navajo Nation hogans indicate aboriginal occupation. See May 7 Tr. at 105:8-13 (Marinelli).

268. The United States restated its position that Jemez Pueblo never had aboriginal title to the Valles Caldera and that the Spanish, through forcible removal and disease, disposed Jemez Pueblo of any land that it may have been using before the Spanish period. See May 7 Tr. at 105:15-106:18 (Marinelli).

269. The United States asserted that, in 1992, Jemez Pueblo acknowledged that Spain had disenfranchised Jemez Pueblo when Jemez Pueblo refused to accept a ceremonial cane from a member of the Spanish royal family and instead presented a resolution requesting the return of its land, which, according to the United States, evinces aboriginal title extinguishment and Jemez Pueblo's inability to show continuous use. See May 7 Tr. at 106:25-108:17 (Marinelli). The Court asked why Spanish interference is significant given the Court's understanding that non-Indian interference cannot effect aboriginal title extinguishments, and the United States responded that conquest can extinguish aboriginal title rights and that Spain essentially conquered Jemez Pueblo.

See May 7 Tr. at 108:18-109:11 (Court, Marinelli). The United States added that Jemez Pueblo's own witnesses admitted to Jemez Pueblo having lost its interest in the Valles Caldera. See May 7 Tr. at 109:12-110:1 (Marinelli).

270. The United States reminded the Court that, in its Oct. 25 MOO, the Court informed the parties that, pursuant to the Tenth Circuit's mandate, the Court must consider evidence of substantial interference with Jemez Pueblo's Valles Caldera use regardless the effect on aboriginal title, and the Court stated that, although it would consider such evidence, so that the Tenth Circuit will having findings in place if it disagrees with the Court's legal analysis, the Court will not find a taking absent substantial interference coupled with Congressional authorization. See May 7 Tr. at 110:2-111:5 (Marinelli, Court). The United States contested the Court's Congressional-authorization requirement and directed the Court to the Tenth Circuit's opinion in this case, which, according to the United States, ties substantial interference to aboriginal title's actual-and-continuous-use requirement for statute-of-limitations purposes before the ICC, which sought to resolve conclusively all pre-1946 claims, and, therefore, the United States' position is that Jemez Pueblo's claim in this case is effectively time-barred, because significant substantial interference occurred well before 1946. See May 7 Tr. at 111:6-113:19 (Marinelli, Court).

271. The United States argued that Jemez Pueblo has the burden to establish continuous use, which, according to the United States, Jemez Pueblo admits it cannot prove when it asserts that the early twentieth century restrictions that the Valles Caldera's private owner imposed on hunting, grazing and other uses caused Jemez Pueblo mental, physical, and spiritual suffering such that Jemez Pueblo lost, and has since worked to reestablish, whatever remaining connection it had to those lands. See May 7 Tr. at 115:10-117:25 (Marinelli). The Court expressed that the United

States' position regarding substantial interference does not square with the Tenth Circuit's conclusion that the land grant to the Baca heirs was insufficient per se to effect aboriginal title extinguishment, because such a grant would necessarily result in substantial interference, and the United States responded that the Tenth Circuit addressed the Court's concern when it stated that a friendly rancher may permit traditional use, but that here Jemez Pueblo suffered extreme interference with its alleged Valles Caldera uses and so cannot satisfy the Tenth Circuit's standard. See May 7 Tr. at 118:2-120:11 (Court, Marinelli).

272. The United States argued that private owners restricted Jemez Pueblo's Valles Caldera access such that Jemez Pueblo could access Redondo Peak approximately twice per year, which, according to the United States, is neither dominant nor even significant. See May 7 Tr. at 120:12-22 (Marinelli).

273. The United States contended that Jemez Pueblo's proposals to Congress to acquire 200 acres on Redondo Peak, to acquire twenty-nine acres on Redondo Peak, and to establish an American Indian seat on the Valles Caldera Trust board are admissions that Jemez Pueblo lacked title to the entire Valles Caldera. See May 7 Tr. at 120:23-121:25 (Marinelli). The United States asserted that Congress not only rejected Jemez Pueblo's proposals but also included language in its legislation that recognizes other Tribes' interests in the Valles Caldera and requires Valles Caldera staff to consult with those Tribes, which the United States argued, is inconsistent with Jemez Pueblo's alleged aboriginal rights. See May 7 Tr. at 122:1-123:7 (Marinelli).

274. The United States contested Jemez Pueblo's assertion that the United States is estopped from taking a position inconsistent with the United States' position in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, because, first, its positions are not

inconsistent given that the claims in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman do not involve water use within the Valles Caldera, and, second, the estoppel principle is inapplicable while the United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman litigation remains pending. See May 7 Tr. at 123:18-124:14 (Marinelli). The United States argued that estoppel principles apply only to facts, for example, Jemez Pueblo's ICC litigation, which, according to the United States, concluded successfully in Jemez Pueblo's favor and therefore precludes Jemez Pueblo from asserting a position different than the one it took before the ICC, namely, that its aboriginal territory includes the Valles Caldrea. See May 7 Tr. at 124:17-125:6 (Marinelli).

275. The United States asserted that the doctrine of laches bars Jemez Pueblo's claims and asked the Court to reconsider its ruling on that issue, because now the Court has a factual record which indicates that the United States' arguments should prevail. See May 7 Tr. at 125:7-14 (Marinelli).

276. The United States returned to its argument regarding the Tribal resolutions and added that they do not fall under the rule 803 hearsay exception, because Jemez Pueblo negotiated them in 2016 and, therefore, they did not arise before the controversy. See May 7 Tr. at 125:15-126:8 (Marinelli). Moreover, argued the United States, in 1998 the Pueblos of Santa Clara and San Ildefonso testified before Congress that no single Tribe can assert an exclusive right to the Valles Caldera, and, according to the United States, such statements deserve more weight than statements made after this litigation commenced. See May 7 Tr. at 126:8-18 (Marinelli).

277. The United States summarized its expert witnesses' opinion testimony regarding multiple Tribes' Redondo Peak use based on evidence presented in this litigation and before the ICC. See May 7 Tr. at 126:18-127:14 (Marinelli).

278. The United States criticized Liebmann's methodology for overcounting Jemez Pueblo Black-on-white pottery and Whatley's methodology for relying exclusively on information from Jemez Pueblo. See May 7 Tr. at 127:14-128:15 (Marinelli).

279. The United States' disputed Jemez Pueblo's contention that Anschuetz did not identify with specificity other Tribes' Valles Caldera use, and directed the Court to Anschuetz' interview with Santa Clara Pueblo member Gregory Cajete and others, who, according to the United States, affirmed that the Valles Caldera belongs to all Pueblos and that the Pueblos customarily respect each other's Valles Caldera use. See May 7 Tr. at 128:16-129:21 (Marinelli).

280. The Court asked the United States to characterize Jemez Pueblo's Valles Caldera use, see May 7 Tr. at 130:25-1315 (Court), and the United States responded:

> Jemez farmed in a noncontinuous manner approximately one percent of the land in the southwest corner of the Preserve . . . . [I]n modern times we have evidence of certain Jemez societies making certain uses of the Preserve lands, and being prevented from engaging in the vast majority of those uses . . . . [T]here is some evidence that at some point Jemez grazed the Preserve lands. But certainly not the evidence that that grazing was continu[ous]. And it was not unique in grazing those lands . . . . Santa Clara certainly grazed those lands as well. . . . So the United States['] position in this case is not that Jemez has never used the Preserve lands. The United States['] position . . . is many tribes and pueblos have used those [l]ands. Frankly in ways that are quite similar to Jemez. . . . [T]here are a multitude of tribes that use this land for a multitude of purposes and there was substantial interference with a lot of that use in the 20th century.

May 7 Tr. at 131:10-132:17 (Marinelli). The United States added that Jemez Pueblo's population for at least several hundred years was comparatively smaller than other Pueblos, and too small to

dominate the Valles Caldera or to engage more powerful Tribes such as the Jicarilla Apache and Navajo Nation. See May 7 Tr. at 133:3-135:10 (Marinelli).

281. The United States summarized the archeological record, and argued that archeological evidence taken as a whole compels the conclusion that Keres, Tewa, and Towa Pueblos, which represent three separate language groups, have used the Valles Caldera since at least the 1200s to gather resources and to practice their respective spiritual traditions. See May 7 Tr. at 135:25-137:19 (Leonard).

282. The United States argued that whether Gauthier considered a particular Liebmann report that Jemez Pueblo accuses the United States of ignoring would not have changed Gauthier's conclusions, because the report in question focuses on a portion of the Banco Bonito that is primarily outside the Valles Caldera and is unpersuasive when viewed against the evidence that supports the Valles Caldera as being a commons. See May 7 Tr. at 137:20-138:15 (Leonard).

283. The United States discussed the Valles Caldera ceramic sherd collection and argued that most Jemez Pueblo sherds are located on the Banco Bonito, which represents a small portion of the Valles Caldera and which Jemez Pueblo farmed seasonally for a relatively brief time period that ceased in 1650 C.E. See May 7 Tr. at 138:17-137:14 (Leonard). In contrast, the United States contended, the Valles Caldera contains far more numerous Keres and Tewa sites that were in use between 1200 C.E. and at least 1750 C.E., several of which are also located on or near the Banco Bonito, thereby defeating Jemez Pueblo's exclusive use arguments. See May 7 Tr. at 139:14-141:14 (Leonard). The United States repeated its argument that no Tribe ever sought Jemez Pueblo's permission to access the Valles Caldera. See May 7 Tr. at 141:14-25 (Leonard).

284. The United States disputed Jemez Pueblo's argument that non-Jemez Pueblo pottery found in the Valles Caldera could have resulted from trade, because, according to the United States, much of the pottery predates the Pueblo Revolt, before which Towa and Tewa Pueblos did not exchange pottery. See May 7 Tr. at 142:25-143:8 (Leonard). The Court asked the United States whether the United States is asking the Court to make a finding that trade did not occur, and the United States responded that the record not only supports such a finding but also the additional finding that relations among Tribes were not close. See May 7 Tr. at 143:9-143:25 (Leonard).

285. The United States suggested that Tribes may have traded Valles Rhyolite obsidian, because researchers have found such obsidian as far away as Oklahoma, Kansas, and North Dakota, or merely collected the obsidian themselves. See May 7 Tr. at 144:5-145:1 (Leonard).

286. The United States argued that the Court of Claims in Zuni Tribe of New Mexico v. United States[193] relied in part on pottery sherd evidence similar to the evidence in this case to conclude that Zuni people continuously used the land at issue. See May 7 Tr. at 145:9-146:6 (Leonard).

287. The United States argued that Gauthier's methodology, wherein Gauthier first determined a sherd's cultural affiliation and then considered whether archeologists found the sherd at a known site before determining the site's cultural affiliation based on the sherd, is more scientific than Liebmann's methodology, which permits Liebmann to conclude that Jemez Pueblo

[193]Neither the United States nor Jemez Pueblo provided a citation to this case at the hearing, and the parties do not cite the case in their post-trial filings. The Court assumes, however, that it is Zuni Tribe of New Mexico v. United States, 12 Cl. Ct. 641 (1987).

was the Valles Caldera's dominant user, because the Valles Caldera ceramics collection is mostly Jemez Pueblo pottery yet disregards that archeologists found most Jemez Pueblo pottery on the Banco Bonito, of which archeologists have surveyed ninety-five percent as compared to a mere thirty-one percent of the Valles Caldera's remaining areas where Keres and Tewa sherds dominate, and thereby defeats Jemez Pueblo's claim to exclusive use. See May 7 Tr. at 146:7-148:14 (Leonard).

288. Jemez Pueblo informed the Court that it has arranged its findings of fact so that the Court can consider whether Jemez Pueblo has aboriginal title to discrete areas within the Valles Caldera if the Court is disinclined to conclude that Jemez Pueblo has aboriginal title to the entire area at issue. See May 7 Tr. at 150:11-19 (West).

289. Jemez Pueblo argued that, to defeat Jemez Pueblo's exclusive use arguments, the Court needs specific evidence regarding other Tribes' uses, of which, according to Jemez Pueblo, for many areas within the Valles Caldera there is none. See May 7 Tr. at 150:19-25 (West).

290. Jemez Pueblo argued that the Court must consider the time period that certain evidence in this case depicts; for example, Anschuetz' map depicts straight line travel to Cerro del Medio from Pueblos established after Spanish arrival and thereby disregards that some Jemez Pueblo villages were much closer to Cerro del Medio in the pre-Spanish period. See May 7 Tr. at 151:1-23 (West).

291. Jemez Pueblo disputed the United States' assertion that Liebmann did not consider Kulisheck's work, that Liebmann conceded that Jemez Pueblo abandoned its Banco Bonito fieldhouses, and that Liebmann admitted that other Pueblos used Cerro del Medio obsidian more than Jemez Pueblo. See May 7 Tr. at 151:1-154:23 (West).

292. Jemez Pueblo disputed the United States' assertion that Jemez Pueblo's population was too small to dominate the Valles Caldera, because Jemez Pueblo's expert witnesses testified that Jemez Pueblo's population, although reduced during the Spanish and Mexican period, was nevertheless sustainable and sufficient to control the Valles Caldera. See May 7 Tr. at 154:9-25 (West). Jemez Pueblo added that García y Griego testified specifically that Jemez Pueblo's population decreased because of epidemic and not hostility, and that Jemez Pueblo maintained the military capability to defend the Valles Caldera throughout the relevant period. See May 7 Tr. at 154:25-156:3 (West).

293. Jemez Pueblo argued that its historic hostilities with other Tribes, for example, the Navajo Nation, do not defeat exclusivity, because, according to Jemez Pueblo, both the Court in this case and the ICC have concluded that unsuccessful raids, temporary encroachments, and mere wandering across land cannot extinguish aboriginal title absent actual, sustained use. See May 7 Tr. at 156:4-21 (West).

294. Jemez Pueblo disputed how the United States characterized Ellis' work, because, although Ellis discussed other Tribes using the Redondo Peak shrine, she labeled it a "Jemez shrine," and, moreover, she created her work for a joint ICC claim that did not involve the Valles Caldera and did not include any findings of fact that could support the United States' judicial estoppel arguments. May 7 Tr. at 157:3-158:7 (West). Jemez Pueblo added that Ellis' work is almost sixty years old, is inconsistent, and does not consider new evidence such as the present ceramics and obsidian records. See May 7 Tr. at 158:8-21 (West).

295. Jemez Pueblo argued that the United States is largely speculating as to other Tribes' Valles Caldera use and is too reliant on Anschuetz' interviews, which, according to Jemez Pueblo,

lack specificity, particularly his interviews with Santa Clara Pueblo and Zia Pueblo members. See May 7 Tr. at 158:22-160:12 (West).

296. Jemez Pueblo urged the Court to read Kelley's expert report, because, according to Jemez Pueblo, Kelley concludes that the Navajo Nation does not consider Redondo Peak a sacred mountain and did not assert before the ICC that its aboriginal territory includes any part of the Valles Caldera, which it used infrequently while raiding other Tribes' livestock. See May 7 Tr. at 160:13-161:7 (West).

297. Jemez Pueblo asked the Court to discredit the United States' arguments about the Jicarilla Apache's and San Ildefonso's claims before the ICC, because Jicarilla Apache's claim was unsuccessful and because San Ildefonso did not claim land within the Valles Caldera's present boundaries. See May 7 Tr. at 161:8-20 (West).

298. Jemez Pueblo criticized the United States for asserting that Dunigan granted Jemez Pueblo Valles Caldera access on only three occasions, because, according to Jemez Pueblo, Jemez Pueblo's Valles Caldera use was well-known within the Dunigan family and Dunigan relied heavily on managers who had permission to grant access absent Dunigan's knowledge. See May 7 Tr. at 161:21-162:6 (West).

299. Jemez Pueblo argued that the United States confused which party has the burden of proof regarding extinguishment when the United States discussed Jemez Pueblo's proposals to Congress in 2000 and 2014. See May 7 Tr. at 162:7-17 (West).

300. Jemez Pueblo argued that its judicial estoppel argument in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman does not turn on water rights, but instead is specific

to the United States' position in that case that Spain did not extinguish Jemez Pueblo's aboriginal title. See May 7 Tr. at 162:18-163:2 (West).

301. Jemez Pueblo argued that the Court admitted the Tribal resolutions pursuant to the Federal Rules of Evidence's provisions for government records and for reputation regarding boundaries. See May 7 Tr. at 163:2-6 (West).

302. Jemez Pueblo argued that the United States relies heavily on ceramics collected from [redacted] to support its conclusion that multiple Tribes used the Valles Caldera, but ignores the evidence which suggests that Tribes occupied that site during two separate time periods, the earlier of which Jemez Pueblo ceramics are present exclusively while the latter also includes significant Jemez Pueblo representation. See May 7 Tr. at 163:11-166:2 (West).

303. Jemez Pueblo disputed the United States' contention that the ceramics record as to Jemez Pueblo is limited to the Banco Bonito and identified numerous unassigned sites in the Valles Caldera's northeast corner which could have belonged to Jemez Pueblo. See May 7 Tr. at 166:2-23 (West).

304. Jemez Pueblo concluded by arguing that Liebmann's obsidian research augments his ceramics studies and shows that Jemez Pueblo used the Valles Caldera through the seventeenth century. See May 7 Tr. at 167:7-17 (West).

LAW REGARDING SOVEREIGN IMMUNITY

305. "The United States cannot be sued without its consent." Garcia v. United States, 709 F. Supp. 2d 1133, 1137 (D.N.M. 2010)(Browning, J.). "Congressional consent -- a waiver of the traditional principle of sovereign immunity -- is a prerequisite for federal-court jurisdiction." Garcia v. United States, 709 F. Supp. 2d at 1137-38. "The plaintiff bears the burden of proving

that Congress has waived sovereign immunity for all of his claims." Garcia v. United States, 709 F. Supp. 2d at 1138. See Bork v. Carroll, 449 F. App'x 719, 721 (10th Cir. 2011)("So it is that a plaintiff seeking to invoke the jurisdiction of the federal courts bears the burden of identifying an applicable statutory waiver of sovereign immunity when challenged to do so."); Summa v. United States, 936 F.2d 584, 1991 WL 114638, at *3 (10th Cir. 1991)(unpublished table decision)(holding in a Federal Tort Claims Act case that the "Plaintiffs bore the burden of proving that the district court had subject matter jurisdiction over their claims" (citing Miller v. United States, 710 F.2d 656, 662 (10th Cir. 1983))).

1. General Sovereign Immunity Principles.

306. It is "axiomatic that the United States may not be sued without its consent and that the existence of consent is a prerequisite for jurisdiction." United States v. Mitchell, 463 U.S. 206, 212 (1983)(citations omitted). See FDIC v. Meyer, 510 U.S. 471, 475 (1994): United States v. Testan, 424 U.S. 392, 399 (1976); United States v. Sherwood, 312 U.S. 584, 586 (1941). As with any jurisdictional issue, the party bringing suit against the United States bears the burden of proving that sovereign immunity has been waived. See James v. United States, 970 F.2d 750, 753 (10th Cir. 1992). A waiver of sovereign immunity cannot be implied and must be unequivocally expressed. See United States v. Nordic Vill., Inc., 503 U.S. 30, 33-34 (1992); United States v. Mitchell, 445 U.S. 535, 538 (1980); United States v. Murdock Mach. & Eng'g Co. of Utah, 81 F.3d 922, 930 (10th Cir. 1996). The United States' agencies also have sovereign immunity absent a waiver. See FDIC v. Meyer, 510 U.S. at 475 ("Absent a waiver, sovereign immunity shields the Federal Government and its agencies from suit.").

2. 28 U.S.C. § 1346(a)(2).

307. Section 1346(a)(2) provides:

> (a) The district courts shall have original jurisdiction, concurrent with the United States Court of Federal Claims, of:
>
> . . .
>
> (2) Any other civil action or claim against the United States, not exceeding $10,000 in amount, founded either upon the Constitution, or any Act of Congress, or any regulation of an executive department, or upon any express or implied contract with the United States, or for liquidated or unliquidated damages in cases not sounding in tort, except that the district courts shall not have jurisdiction of any civil action or claim against the United States founded upon any express or implied contract with the United States or for liquidated or unliquidated damages in cases not sounding in tort which are subject to sections 7104(b)(1) and 7107(a)(1) of title 41.

28 U.S.C. § 1346(a)(2). The Supreme Court has held that this statute "empowers district courts to award damages but not to grant injunctive or declaratory relief." Lee v. Thornton, 420 U.S. at 140. The Tenth Circuit found the exercise of jurisdiction under this statute improper when the plaintiff "sought the equitable relief of rescission, while employing language designed to render the federal defendants liable in damages in the amount of the promissory note." Ortiz v. United States, 661 F.2d 826, 830-31 (10th Cir. 1981). See McKay v. United States, 516 F.3d 848, 851 (10th Cir. 2008)("But this action involves a contractual, not a constitutional, obligation and plaintiff does not cite, nor have we found, any contract case holding that [28 U.S.C. § 1346(a)(2)] may be avoided . . . by forgoing the damages remedy the Act permits and seeking equitable relief it prohibits."). "A plaintiff attempting to invoke the subject matter of the federal district courts bears the burden to establish his or her claim does not exceed the $10,000.00 jurisdictional limit

established by" 28 U.S.C. § 1346(f). Cortez v. EEOC, 585 F. Supp. 2d 1273, 1288 (D.N.M. 2007)(Browning, J.).

3. 28 U.S.C. §§ 1346(f) and 2409a.

308. Section 1346(f) provides: "The district courts shall have exclusive original jurisdiction of civil actions under section 2409a to quiet title to an estate or interest in real property in which an interest is claimed by the United States." 28 U.S.C. § 1346(f). Section 2409a provides in relevant part:

> The United States may be named as a party defendant in a civil action under this section to adjudicate a disputed title to real property in which the United States claims an interest, other than a security interest or water rights. This section does not apply to trust or restricted Indian lands . . . .

28 U.S.C. § 2409a(a). These statutes, together referred to as the QTA, provide subject-matter jurisdiction and a waiver of sovereign immunity for quiet-title actions against the United States. See Match-E-Ba-Nash-She-Wish Band of Pottawatomi Indians v. Patchak, 132 S. Ct. 2199, 2206 (2012)("From its title to its jurisdictional grant to its venue provision, the Act speaks specifically and repeatedly of 'quiet title' actions. That term is universally understood to refer to suits in which a plaintiff not only challenges someone else's claim, but also asserts his own right to disputed property." (citations omitted)).

309. "Congress intended the QTA to provide the exclusive means by which adverse claimants could challenge the United States' title to real property." United States v. Mottaz, 476 U.S. 834, 841 (1986). The Tenth Circuit has stated that, "as its legislative history makes clear, the QTA applies even where the plaintiff claims an estate less than a fee simple . . . [such as] an

easement." McKay v. United States, 516 F.3d at 850 (alteration in original)(internal quotation marks omitted).

310. 28 U.S.C. § 2409a(g) provides:

> Any civil action under this section, except for an action brought by a State, shall be barred unless it is commenced within twelve years of the date upon which it accrued. Such action shall be deemed to have accrued on the date the plaintiff or his predecessor in interest knew or should have known of the claim of the United States.

28 U.S.C. § 2409a(g). The Supreme Court has stated: "The limitations period is a central condition of the consent given by the Act." United States v. Mottaz, 476 U.S. at 843. A plaintiff's claim being timely under this statute of limitations is a jurisdictional prerequisite to suit under 28 U.S.C. § 2409a. See Block v. North Dakota, 461 U.S. at 287 ("When waiver legislation contains a statute of limitations, the limitations provision constitutes a condition on the waiver of sovereign immunity."); Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1175 ("Timeliness under subsection [(g)[194]] is a jurisdictional prerequisite to suit under section 2409a.")(alteration in original)(footnote added).

311. "The twelve-year limitations period is strictly construed in favor of the United States." Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1176. The Tenth Circuit has "held that for purposes of determining when 'the claim' accrues under § 2409a(f), '[a]ll that is necessary is a reasonable awareness that the government claims some interest adverse to the plaintiffs.'" Vincent Murphy Chevrolet Co., Inc. v. United States,

[194]An older version of 2409a had the statute-of limitations provision appear in subsection (f) of the statute as opposed to subsection (g).

766 F.2d 449, 452 (10th Cir. 1985)(quoting Knapp v. United States, 636 F.2d 279, 283 (10th Cir. 1980)). "Knowledge of the claim's full contours is not required. All that is necessary is a reasonable awareness that the Government claims some interest adverse to the plaintiff's." Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1176 (emphasis in original).

312. Furthermore, "the United States need not assert a full legal title in the disputed property for the limitations period to accrue; the claimed adverse interest in the title of the property merely must be substantial enough to create a cloud on title." Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1176. The Tenth Circuit has held that the knowledge of deed restrictions in place that benefitted the United States was sufficient to trigger the running of the statute of limitations under 28 U.S.C. § 2409a(f). See Vincent Murphy Chevrolet Co., Inc. v. United States, 766 F.2d at 452 ("Appellants concede knowledge of a 'claim' -- the deed restrictions -- as early as 1965. This is all that is necessary under § 2409a(f)."). The Tenth Circuit elaborated:

> While the Supreme Court in *Block* [v. North Dakota, 461 U.S. 273, 287] indicated that the statutes waiving immunity should not be construed in an unduly restrictive manner, it cautioned that these statutes could not be interpreted in such a manner as to "'extend the waiver beyond that which Congress intended.'" *Block v. North Dakota*, 461 U.S. at 287, 103 S.Ct. at 1820.
>
> To hold that the twelve-year statute of limitations did not begin to run until conditions began changing would give rise to an interpretation of the term "claim" under § 2409a(f) which could extend the limitations period indefinitely. We cannot extend the waiver of immunity under the quiet title act beyond that which Congress could have intended and we refuse to do so without a clear expression of legislative intent. See *Stubbs v. United States*, 620 F.2d at 780-81 (where this court found that "[C]ongress was reluctant . . . to open up stale claims to litigation").
>
> Appellants argue that in the twelve-year period following 1965, they would

> not have had a cause of action to quiet title since there would have been no justiciable controversy as the cause of action could not have accrued until conditions began changing. While such argument evokes empathy, we do not believe that it comports with the limited waiver of sovereign immunity Congress intended, and in construing the statute of limitations strictly as a condition to the waiver of sovereign immunity, we must reject appellants' argument.

Vincent Murphy Chevrolet Co., Inc. v. United States, 766 F.2d at 452.

313. Although 28 U.S.C. § 2409a contains a sovereign immunity waiver, it is limited to title claims that do not involve "trust or restricted Indian lands." 28 U.S.C. § 2409a(a).

> Thus, the Act's waiver of sovereign immunity is qualified by an exception for suits challenging title to lands held in trust for Indian tribes: "when the United States claims an interest in real property based on that property's status as trust or restricted Indian lands, the Quiet Title Act does not waive the Government's immunity."

Governor of Kan. v. Kempthorne, 516 F.3d 833, 841 (10th Cir. 2008)(quoting Neighbors for Rational Dev., Inc. v. Norton, 379 F.3d 956, 961 (10th Cir. 2004)).

314. The Supreme Court has emphasized the Indian-land exception's importance: "If we were to allow claimants to try the Federal Government's title to land under an officer's-suit[195] theory, the Indian land exception to the QTA would be rendered nugatory." Block v. North Dakota, 461 U.S. at 285. Thus, "when the United States claims an interest in real property based

[195]An "officer's suit" was a means for obtaining relief in a title dispute with the federal government before Congress passed the QTA. Block v. North Dakota, 461 U.S. at 281.

> In the typical officer's suit involving a title dispute, the claimant would proceed against the federal officials charged with supervision of the disputed area, rather than against the United States. The suit would be in ejectment or, as here, for an injunction or a writ of mandamus forbidding the defendant officials from interfering with the claimant's property rights.

Block v. North Dakota, 461 U.S. at 281.

on that property's status as trust or restricted Indian lands, the Quiet Title Act does not waive the government's immunity." United States v. Mottaz, 476 U.S. at 843. See Wildman v. United States, 827 F.2d 1306, 1309 (9th Cir. 1987)("The ordinary reason[s] for enforcing sovereign immunity . . . are reinforced when Indian lands are in question."). "As long as the United States has a 'colorable claim' to a property interest based on that property's status as trust or restricted Indian lands, the QTA renders the government immune from suit." State of Alaska v. Babbitt, 75 F.3d 449, 451-52 (9th Cir. 1996).

315. "Because § 2409a limits the sovereign immunity of the United States, it must be interpreted according to federal law." Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1177. "However, federal courts may properly look to state law as an aid in determining the application of statutory language to specific facts." Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1177. "In particular, 'questions involving ownership, transfer and title to real estate have traditionally been resolved according to the laws of the state where the realty is located.'" Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1177 (quoting Amoco Prod. Co. v. United States, 619 F.2d 1383, 1387 (10th Cir. 1980)). "But 'such state law should be compatible with the purpose of [the legislation so as] to find the rule that will best effectuate the federal policy.'" Rio Grande Silvery Minnow (Hybognathus amarus) v. Bureau of Reclamation, 599 F.3d at 1177 (quoting Vincent Murphy Chevrolet Co., 766 F.2d at 451 (alterations in original)(internal quotation marks omitted)).

LAW REGARDING RULE 19

316. Parties meeting the criteria laid out in rule 19(a)(1) are required parties. If a required party is not joined, then "the court must order that the person be made a party." Fed. R. Civ. P. 19(a)(2). If the required party cannot be joined, then a court must consider the factors in rule 19(b) to determine whether it should dismiss the case or should allow the case to proceed with the existing parties.

317. Earlier caselaw generally describes those parties who should be joined under rule 19(a) as necessary parties, and those necessary parties whose absence requires that a case be dismissed under rule 19(b) as indispensable parties, or necessary and indispensable parties. The 2007 amendments to the rules changed the term "necessary parties" to "required parties." Fed. R. Civ. P. 19. These amendments were stylistic only, however, and much of the caselaw interpreting rule 19 predates the amendments, and refers to necessary and indispensable parties. See Fed. R. Civ. P. 19 advisory committee's notes 2007; Hernandez v. Chevron U.S.A., Inc., 347 F. Supp. 3d 921, 961 (D.N.M. 2018)(Browning, J.).

1. Incomplete Relief.

318. One basis on which a party may be a required or necessary party is if, "in that person's absence, the court cannot accord complete relief among existing parties." Fed. R. Civ. P. 19(a)(1)(A). A court is able to afford complete relief when a party's absence "does not prevent the plaintiffs from receiving their requested . . . relief." Sac & Fox Nation of Missouri v. Norton, 240 F.3d at 1258 (10th Cir. 2001). As Moore's Federal Practice explains, this provision "requires joinder when nonjoinder precludes the court from effecting relief not in some overall sense, but between *extant parties.*" 4 J. Moore & R. Freer, Moore's Federal Practice § 19.03[2][b],

at 19-39 (3d ed. 2009)(emphasis in original). "Properly interpreted, the Rule is not invoked simply because some absentee may cause future litigation. . . . The fact that the absentee might later frustrate the outcome of the litigation does not by itself make the absentee necessary for complete relief." 4 Moore's Federal Practice § 19.03[2][b], at 19-39 to 19-41 (footnotes omitted).

319. Those cases discussing rule 19(a)'s complete-relief segment look at whether a plaintiff or other claimant can be granted complete relief without adding parties. For example, in Salt Lake Tribune Pub. Co., LLC v. AT & T Corp., 320 F.3d 1081 (10th Cir. 2003), the Tenth Circuit analyzed whether the district court could grant the plaintiff all the relief that it was seeking on its claims. See 320 F.3d at 1097. In Associated Dry Goods Corp. v. Towers Financial Corp., 920 F.2d 1121 (2d Cir. 1990), the United States Court of Appeals for the Second Circuit held that an absent party was a necessary party to afford a counterclaimant complete relief because the counter-defendant could not comply with the injunction that the counterclaimant sought without the consent of the absent party. See 920 F.2d at 1124. In Champagne v. City of Kansas City, 157 F.R.D. 66 (D. Kan. 1994)(Lungstrum, J.), a number of paramedics filed suit against the City of Kansas City, alleging overtime-pay violations. See 157 F.R.D. at 67. The City sought to join as plaintiffs other paramedics who had not sued. See 157 F.R.D. at 67. The Honorable John W. Lungstrum, Senior United States District Judge for the United States District Court for the District of Kansas, held:

> Complete relief refers to relief as between the persons already parties to the action and not as between a present party and the absent party whose joinder is sought. The named plaintiffs in the present action would be able to obtain all the relief requested without the joinder of four additional paramedics. Defendant's assertion that all persons whose claims are identical to the plaintiffs should be joined is not within the meaning of complete relief.

157 F.R.D. at 67 (citation omitted). See Hernandez v. Chevron U.S.A., Inc., 347 F. Supp. 3d at 961.

2. Inconsistent Obligations.

320. Another way in which a party can be a required or necessary party is if the "person claims an interest relating to the subject of the action and is so situated that disposing of the action in the person's absence may . . . leave an existing party subject to a substantial risk of incurring double, multiple, or otherwise inconsistent obligations because of the interest." Fed. R. Civ. P. 19(a)(1)(B)(ii). This clause "compels joinder of an absentee to avoid inconsistent *obligations*, and not to avoid inconsistent adjudications. It is not triggered by the possibility of a subsequent adjudication that may result in a judgment that is inconsistent as a matter of logic." 4 Moore's Federal Practice § 19.03[4][d], at 19-59 to 19-60 (emphasis in original)(footnotes omitted). This understanding is reflected in the United States Court of Appeals for the First Circuit's description of the rule:

> "Inconsistent obligations" are not . . . the same as inconsistent adjudications or results. Inconsistent obligations occur when a party is unable to comply with one court's order without breaching another court's order concerning the same incident. Inconsistent adjudications or results, by contrast, occur when a defendant successfully defends a claim in one forum, yet loses on another claim arising from the same incident in another forum. Unlike a risk of inconsistent obligations, a risk that a defendant who has successfully defended against a party may be found liable to another party in a subsequent action arising from the same incident -- i.e., a risk of inconsistent adjudications or results-does not necessitate joinder of all of the parties into one action pursuant to Fed. R. Civ. P. 19(a).

Delgado v. Plaza Las Americas, Inc., 139 F.3d 1, 3 (1st Cir. 1998)(citations omitted).

321. The United States Court of Appeals for the Ninth Circuit has adopted the First Circuit's approach to rule 19(a)(1)(B)(ii). See Cachil Dehe Band of Wintun Indians of the Colusa

Indian Community v. California, 547 F.3d 962, 976 (9th Cir. 2008)("Cachil"). Accordingly, the Ninth Circuit held that there was no risk of inconsistent obligations in a situation in which the State of California might have to adhere to one interpretation of a compact when dealing with particular Indian Tribes, while following a different interpretation in its dealings with other Tribes, because California could consistently deal with each Tribe according to the different judgments. See Cachil, 547 F.3d at 976. Other Courts of Appeals, as well as lower courts and leading treatises, have all taken the same approach. See, e.g., Boone v. General Motors Acceptance Corp., 682 F.2d 552, 554 (5th Cir. 1982)(holding that, where "multiple litigation might result . . . [but there is] little possibility of inconsistent obligations," rule 19(a) is not implicated); Field v. Volkswagenwerk AG, 626 F.2d 293, 301 (3d Cir. 1980); Fisherman's Harvest, Inc. v. United States, 74 Fed. Cl. 681, 688-89 (Fed. Cl. 2006); 4 Moore's Federal Practice § 19.03[4][d], at 19-59 to 19-61 (stating that inconsistent obligations occur only when a party cannot obey two conflicting order from different courts). While the Tenth Circuit has not devoted extended discussion to inconsistent obligations, it has given, as an example of inconsistent obligations, a hypothetical scenario in which a federal district court orders a defendant to transfer stock to the plaintiff while a state court orders the same defendant to transfer the same stock to a different party who is not involved in the federal litigation. See Salt Lake Tribune Pub. Co., LLC v. AT & T Corp., 320 F.3d at 1098.

LAW REGARDING EXPERT TESTIMONY

322. "Since the Supreme Court of the United States decided [Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)("Daubert"], trial courts have had the responsibility to make certain that proffered experts will assist the jury in understanding the evidence and in determining the factual issues it must decide." United States v. Gutierrez-Castro, 805 F. Supp. 2d

1218, 1224 (D.N.M. 2011)(Browning, J.). "The Court now must not only decide whether the expert is qualified to testify, but, under Daubert, whether the opinion testimony is the product of a reliable methodology." United States v. Gutierrez-Castro, 805 F. Supp. 2d at 1224. "Daubert . . . requires a court to scrutinize the proffered expert's reasoning to determine if that reasoning is sound." United States v. Gutierrez-Castro, 805 F. Supp. 2d at 1224.[196]

[196]One of the things that consistently amazes the Court is the unwillingness of modern lawyers to tailor their briefing to the particular judge before whom they argue. The Court still gets briefings filled with citations to other district cases, even though it has written opinions more directly on point. See, e.g., United States v. Begay, 310 F. Supp. 3d 1318, 1336 (D.N.M. 2018)(Browning, J.)(party citing Caine v. Burge, No. 11 C 8996, 2013 WL 1966381, at *1 (N.D. Ill. May 10, 2013)(Durkin, J.) to argue for admitting expert testimony); United States v. Chapman, No. CR 14-1065 JB, 2015 WL 10401776, at *3 (D.N.M. Aug. 28, 2015)(Browning, J.)(party citing First Data Corp. v. Konya, No. CIV 04-0856, 2007 WL 2116378, at *10 (D. Colo. July 20, 2007)(Kane, J.)). There is nothing wrong -- and a lot right -- with our colleagues in other states, but it mystifies the Court why lawyers continue not to research and know the judge before whom they are practicing.

Nowhere is the need to research the presiding judge more important than in the Daubert area. Given Daubert's and rule 702's demands, trial judges often have to write detailed opinions, with findings of fact and conclusions of law. See, e.g., Abraham v. WPX Prod. Prods., LLC, 184 F. Supp. 3d 1150 (D.N.M. 2016)(Browning, J.); United States v. Rodriguez, 125 F. Supp. 3d 1216 (D.N.M. 2015)(Browning, J.); Montoya v. Sheldon, 286 F.R.D. 602 (D.N.M. 2012)(Browning, J.) Cf. Admissibility of Scientific Evidence, SJ081 ALI-ABA 1 , 21 ("Appellate courts increasingly insist that even when no *Daubert* hearing is held, the district court must create a sufficient record so that the basis for the admissibility decision can be reviewed."). The written opinions are a goldmine for figuring out what the trial judge is going to do with the next expert's report. Lawyers should research their judge thoroughly through Lexis and Westlaw. In the twenty-first century, litigants can know their judge like the hand knows the glove.

When the Court was a young associate at a large law firm after its clerkships, the Court and a co-associate, and the Court's future law partner, would swing by the University of New Mexico School of Law every evening after work, alternating days, to go through a box of slip opinions by the federal judges. The lower federal judges in the early 1980s would send the opinion to the counsel of record by mail but also send a copy to the law library. The Court and the other associate would copy almost every opinion and create binders by subject matter: rule 12(b)(1), rule 32, rule 56, etc. Some binders got so large that they got dividers to divide the opinions by specific judges. The Court and the other associate kept up the laborious data collection even when the Court and the other associate started their own firm. The Court and its firm would cite, quote, and discuss the opinions of the local federal judges back to them in its briefing.

1. Rule 702.

323. 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.[197] Rule 702 thus requires the trial court to "determine whether the expert is proposing to testify to (1) scientific, technical, or other specialized knowledge that (2) will assist

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If the Court went to this much travail to locate all the opinions of the judge before whom it was appearing, imagine what it thinks when it receives a brief citing, discussing, or quoting other courts' opinions on topics on which the Court has written, sometimes extensively and exhaustively. In contrast to the paper world in which the Court lived in the early and mid-1980s, all an associate has to do with Lexis and Westlaw is put in the judge's name and the subject to be researched. With research by judge and topic so easy today, there is no excuse for a lawyer not to know the opinion of the judge before whom they are practicing.

[197]Rule 702's most prominent hurdle is the sufficiency of basis. Yet the judiciary's uncomfortableness with analyzing an opinion's basis can be seen in the conflict in the cases. The current conflict is whether the questions of sufficiency of basis, and of application of principles and methods, are matters of weight or admissibility. Compare Ruggiero v. Warner-Lambert Co., 424 F.3d 249, 255 (2d Cir. 2005)("[W]hen 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." (quoted in David E. Bernstein & Eric G. Lasker, Defending Daubert: It's Time to Amend Federal Rule of Evidence 702, 57 Wm. & Mary L. Rev. 1, 32 (2015)), with Milward v. Acuity Speciality Prods. Grp. 639 F.3d 11, 22 (1st Cir. 2011)("[T]he soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusions based on that analysis are factual matters to be determined by the trier of fact." (quoted in Bernstein & Lasker, supra, at 33). There should not be a conflict.

the trier of fact to understand or determine a fact in issue." United States v. Muldrow, 19 F.3d 1332, 1337 (10th Cir. 1994). Rule 702 uses a liberal definition of "expert." Fed. R. Evid. 702

Rule 702 states that these are questions of admissibility. Yet many courts treat them as questions of weight. See, e.g., Bernstein & Lasker, supra, at 33 (citing several Courts of Appeals that instruct district courts to consider the sufficiency of basis and/or application of the methodology as questions of weight).

What is most interesting is what the divergence from Supreme Court precedent and rule 702 suggest. The divergence suggests that Daubert and rule 702 are too academic. Daubert and rule 702 write better than they work in the courtroom and in practice. Lower courts continue -- rightfully so -- to be uncomfortable with deciding these issues with the Sixth and Seventh Amendments to the Constitution of the United States protecting the right to jury trials in civil and criminal cases. Cf. Bernstein & Lasker, supra, at 33 ("[C]ourts have held that '[t]he district court usurps the role of the jury, and therefore abuses its discretion, if it unduly scrutinizes the quality of the expert's data and conclusions rather than the reliability of the methodology the expert employed.'" (quoting Manpower, Inc. v. Ins. of Pa., 732 F.3d 796, 806 (7th Cir.)); Ronald J. Allen, Esfand Fafisi, Daubert and Its Discontents, Brooklyn L.R., 131, 147 (2010)(describing an argument for Daubert's unconstitutionality under the Seventh Amendment).

The Court is concerned that the federal courts will overreact to the wayward opinions that have created a split whether sufficiency of basis and application of methods is for the court or goes to the evidence's weight. The Court is concerned that the federal courts are going in the direction of new rules. There is a built-in institutional bias towards more rules and amendments. The Judicial Conference runs the federal judiciary through committees. See About the Judicial Conference, U.S. Cts., https://www.uscourts.gov/about-federal-courts/governance-judicial-conference/about-judicial-conference (last visited Jan. 5, 2019)("The Conference operates through a network of committees . . . "). The Judicial Conference has a Standing Committee on Rules. The Standing Committee has five Advisory Committees: (i) Civil Procedure; (ii) Criminal Procedure; (iii) Evidence; (iv) Bankruptcy; and (v) Appellate. See How the Rulemaking Process Works, U.S. Cts., https://www.uscourts.gov/rules-policies/about-rulemaking-process/how-rulemaking-process-works (last visited Jan. 5, 2019). Each of these advisory committees has a reporter, almost always a prominent professor. See Overview for the Bench, Bar, and Public, U.S. Cts., https://www.uscourts.gov/rules-policies/about-rulemaking-process/how-rulemaking-process-works/overview-bench-bar-and-public (last visited Jan. 5, 2019). The reporter position is more prestigious if the reporter can get new rules promulgated; they have to justify their existence. There is thus a very smart, likeable, and liked person putting pressure on the committee to amend the rules. While judges are more conservative about promulgating new rules, they too often succumb to the reporter's pressure. The result is that the federal judiciary and the bar gets a host of new rules almost every year. The development of new rules burdens the federal judiciary and the bar -- all of which are overworked -- with mandatory changes each year, often constituting little more than stylistic changes. Everyone has to get new rule books every year. The burden of new rules often does not justify the meager benefits of the changes.

advisory committee's note to 1972 proposed rules ("[W]ithin the scope of this rule are not only experts in the strictest sense of the word, e.g., physicians, physicists, and architects, but also the large group sometimes called 'skilled' witnesses, such as bankers or landowners testifying to land values."). An expert is "required to 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). In United States v. Goxcon-Chagal, 886 F. Supp. 2d 1222, 1239 (D.N.M. 2012)(Browning, J.), the Court identified as relevant, and admitted, testimony on:

> (ii) the likelihood that a drug organization would entrust individuals outside of the organization with a large amount of drugs; (iii) the significance of the presence of multiple cellular telephones in the vehicle; (iv) the significance of the possession of multiple license plates; (v) the separation of individuals who package drugs and individuals who are drug couriers within a drug organization; (vi) the significance of the presence of multiple air fresheners in the vehicle; and (vii) the significance of the presence of a firearm in the vehicle.

886 Supp. 2d at 1239. The Court did not admit testimony on whether a highway portion was a "drug route," because the "proposed testimony is too close to characterizing 'nearly any trip down the interstate' as traveling in a known drug route." United States v. Goxcon-Chagal, 886 F. Supp. 2d at 1247. See United States v. Harry, 20 F. Supp. 3d 1196, 1243 (D.N.M. 2014)(Browning, J.)(deeming inadmissible testimony on a sex crime victim's demeanor during an examination, because "demeanor is not always a reliable indicator whether someone is telling the truth, especially about sex -- then no expert testimony is needed. That knowledge is well within the knowledge of jurors and most people."); United States v. Rodella, No. CR 14-2783 JB, 2014 WL 6634310, at *25 (D.N.M. Nov. 19, 2014)(Browning, J.)(stating that "testimony regarding nationally accepted police standards is irrelevant" to issues of "excessive force and"

reasonableness). The proponent of expert testimony has the burden of establishing by a preponderance of the evidence that the pertinent admissibility requirements are met.[198] See Morales v. E.D. Etnyre & Co., 382 F. Supp. 2d at 1266 (citing Bourjaily v. United States, 483 U.S. 171, 175 (1987)). Once the trial court has determined that expert testimony would be helpful to the trier of fact, a witness "may qualify as an expert by knowledge, skill, experience, training, or education and . . . the expert . . . should not be required to satisfy an overly narrow test of his own qualifications." Gardner v. Gen. Motors Corp., 507 F.2d 525, 528 (10th Cir. 1974)(internal quotation marks omitted). See United States v. Rodella, 2014 WL 6634310, at *20 ("Because of [the proposed expert's] lack of practical experience, lack of nationwide experience, and lack of an advanced degree in criminology or law enforcement, [the proposed expert] is not qualified to testify about nationally accepted police procedures and practices."); United States v. Goxcon-Chagal, 886 F. Supp. 2d at 1245 (determining an expert qualified to testify to drug trafficking

[198]The Court is clipping the wings of experts all the time. See, e.g., Abraham v. WPX Prod. Prods., LLC, 184 F. Supp. 3d at 1204 (precluding an expert from discussing class certification requirements, but allowing the expert to testify to information about royalty instruments); United States v. Rodriguez, 125 F. Supp. 3d at 1255-56 (permitting an expert to describe a cartel's structure and organization, and to explain drug running, but not admitting the expert's testimony opining that the defendant was running drugs); Montoya v. Sheldon, 286 F.R.D. at 619 (precluding a treating physician from testifying about a party's post-traumatic stress disorder diagnosis, opinions about the causes for a party's symptoms, or a party's prognosis). Attorneys ask experts to do too much, and experts try to do too much. The experts are being paid; they are trying to be helpful to the attorney. Cf. Mark I. Bernstein, Jury Evaluation of Expert Testimony Under the Federal Rules, Drexel L.R. 239, 268 (2015)("Any use of expert witnesses paid by a party raises concerns of partisanship, competency, and honesty. Because experts are partisan witnesses paid by a party, there is an inevitable danger of bias."). The experts will often do anything. They toss statements into their reports to be helpful. Too many attorneys release the report as written -- without editing and without trimming. This failure to edit and to trim creates unnecessary litigation. Many expert reports contain statements that the proponent attorney does not need or even want. The reports draw Daubert motions or rule 702 challenges. The proponent is then forced to defend the statements that he or she does not even need or want.

when he had personal knowledge of the subject from working in the Drug Enforcement Agency for almost fifteen years).

324. Courts should, under the Federal Rules of Evidence, liberally admit expert testimony, see United States v. Gomez, 67 F.3d 1515, 1526 (10th Cir. 1995)(describing rule 702 as a "liberal standard"), and the trial court has broad discretion in deciding whether to admit or exclude expert testimony, see Werth v. Makita Elec. Works, Ltd., 950 F.2d 643, 647 (10th Cir. 1991)(noting the trial court's decision will not be overturned "unless it is manifestly erroneous or an abuse of discretion"). "The Tenth Circuit appears to draw a line between expert testimony regarding credibility and expert testimony regarding voluntariness." United States v. Ganadonegro, 805 F. Supp. 2d 1188, 1214 (D.N.M. 2011)(Browning, J.)(citing United States v. Benally, 541 F.3d 990, 996 (10th Cir. 2008)). "The Tenth Circuit may draw this distinction because, generally, it is the jury's exclusive function to make credibility determinations . . . whereas a court makes a pretrial determination of the constitutional voluntariness of a statement." United States v. Ganadonegro, 805 F. Supp. 2d at 1214 (citation omitted)(citing United States v. Adams, 271 F.3d 1236, 1245 (10th Cir. 2001)).

2. The Standard in Daubert.

325. In its gatekeeper role, a court must assess the reasoning and methodology underlying an expert's opinion, and determine whether it is both scientifically valid and relevant to the facts of the case, i.e., whether it is helpful to the trier of fact. See Daubert, 509 U.S. at 594-95; Witherspoon v. Navajo Ref. Co., No. 03-1160, 2005 WL 5988649, at *2 (D.N.M. July 18,

2005)(Black, J.)(citing Dodge v. Cotter Corp., 328 F.3d 1212, 1221 (10th Cir. 2003)).[199] The Supreme Court articulated a non-exclusive list of factors that weigh into a district court's first-step

[199]The current law -- and its trajectory -- are casting serious shadows over using expensive experts. This reality is particularly true in cases involving jury trials. It is probably a good time for the judiciary to rethink expert testimony rather than continuing with the current regime and making incremental changes.

Lawyers and appellate courts overemphasize the importance of experts and distrust juries. See Sanja Kutnjak Ivkovic & Valerie P. Hans, Jurors' Evaluations of Expert Testimony: Judging the Messenger and the Message, 28 Law & Soc. Inquiry 441, 442 (2003)("One key assumption underlying the Daubert line of cases is that jurors might be duped by a persuasive but untrustworthy expert who testifies about matters that are not based on sound scientific principles or data."). Cf., Elaine E. Sutherland, Undue Deference to Experts Syndrome?, 16 Ind. Int'l & Comp. L. Rev. 375, 382 (2006)("[I]f one is coming from a position of ignorance, the person who holds the key to that certain body of knowledge is something of a savior. The danger . . . is that this empowerment of the expert witness will result in undue deference to his or her opinion."). Appellate judges often do not have extensive or any trial experience, particularly as Presidents want to rule from the grave, and appoint younger and younger appellate judges, who often -- because of their years -- have not spent a lot of time trying cases in the courtroom before juries. Academics, corporate lawyers, general counsel, and appellate judges -- without considerable courtroom experience -- think that experts will easily mislead juries. Yet, the Court talks regularly to juries after jury trials, and the Court listens to trial lawyers talking to juries after jury trials. Juries often expressly state that they disregarded the parties' experts. The Court often hears comments like the "expert was arrogant and/or incomprehensible."

Part of the problem is that academics and, often, appellate jurists do not appreciate or understand modern American jurors. Jurors have become very independent, and do not take direction well or easily from anyone -- the judge, lawyers, or experts. The days of dressing up for court in coats and ties, and doing what the judge tells them to do are fading. Jurors question everything. If the Court tells them to go in one door, they want to use another. Whereas jurors used to compliment the Court's jury instructions as giving a roadmap to the jurors' decisions, jurors now criticize even the uniform or pattern jury instructions. Modern American jurors do not like to think that they are being told what to do. And they certainly do not like experts telling them what to do; modern American jurors do not like the idea of "experts" who are smarter than they are.

At the same time that modern American jurors are showing more independence, paternalistic Daubert hearings have proliferated. This phenomenon raises many concerns. One concern is the sheer prevalence of Daubert motions. Cf. Cynthia Lynne Pike, The Impact of Revised MRE [sic] 702 and 703 in Response to Daubert, 52 Wayne L. Rev. 285, 301 (2006)(describing the effects of a state-specific rule resembling rule 702 and stating: "One of the more important tactical strategies in dealing with the court's role as gatekeeper under the new MRE 702 is the use of motions in limine and other pretrial evidentiary hearings."). Motions to

reliability determination, including: (i) whether the method has been tested; (ii) whether the method has been published and subject to peer review; (iii) the error rate; (iv) the existence of standards and whether the witness applied them in the present case; and (v) whether the witness' method is generally accepted as reliable in the relevant medical and scientific community.[200] See Daubert, 509 U.S. at 594-95. The district court is also to consider whether the witness' conclusion represents an "unfounded extrapolation" from the data; whether the witness has adequately accounted for alternative explanations for the effect at issue; whether the opinion was reached for the purposes of litigation or as the result of independent studies; or whether it unduly relies on anecdotal evidence. See Witherspoon v. Navajo Ref. Co., 2005 WL 5988649, at *3 (citing Gen. Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997)). The Tenth Circuit stated the applicable standard in Norris v. Baxter Healthcare Corp., 397 F.3d 878 (10th Cir. 2005):

> Rule 702 requires the district court to "ensure that any and all scientific testimony or evidence is not only relevant, but reliable." Bitler v. A.O. Smith Corp., 391 F.3d 1114, 1120 (10th Cir. 2004)(quoting Daubert, 509 U.S. at 589 . . .). This obligation involves a two-part inquiry. Id. "[A] district court must [first] determine if the expert's proffered testimony . . . has 'a reliable basis in the knowledge and experience of his [or her] discipline.'" Id. (quoting Daubert, 509 U.S. at 592 . . .). In making this determination, the district court must decide "whether the reasoning or methodology underlying the testimony is scientifically valid. . . ." Id. (quoting Daubert, 509 U.S. at 592-93 . . .). Second, the district court must further inquire

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dismiss, class certification motions, motions for summary judgment, sentencings, and competency hearings -- in addition to testimony -- now require Daubert hearings. The costs of Daubert motions, to the court and the parties, is staggering. The time-consuming nature of Daubert motions is overwhelming.

[200]Federal courts are obsessed with reliability problems. This idea pops up several places and in several ways, creating multiple grounds upon which the court has the power to exclude the expert. See Admissibility of Scientific Evidence, SJ081 ALI-ABA 1 , 27 (noting that courts treat the "assist the trier of fact" requirement for expert testimony as a relevancy requirement and stating that rule 401 already requires evidence to be relevant).

> into whether proposed testimony is sufficiently "relevant to the task at hand." Daubert, 509 U.S. at 597 . . . .

397 F.3d at 883-84 (footnote omitted). "The second inquiry is related to the first. Under the relevance prong of the Daubert analysis, the court must ensure that the proposed expert testimony logically advances a material aspect of the case. . . . The evidence must have a valid scientific connection to the disputed facts in the case." Norris v. Baxter Healthcare Corp., 397 F.3d at 884 n.2 (citing Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311, 1315 (9th Cir. 1995)(on remand from the Supreme Court); Daubert, 509 U.S. at 591). If the expert's proffered testimony fails on the first prong, the court does not reach the second prong. See Norris v. Baxter Healthcare Corp., 397 F.3d at 884. In Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999), the Supreme Court expanded the rules under Daubert to non-scientific expert testimony. See Kumho Tire Co. v. Carmichael, 526 U.S. at 141 ("We conclude that Daubert's general holding -- setting forth the trial judge's general 'gatekeeping' obligation -- applies not only to testimony based on 'scientific' knowledge, but also to testimony based on 'technical' and 'other specialized' knowledge." (quoting Carmichael v. Samyang Tires, Inc., 923 F. Supp. 1514, 1521 (S.D. Ala. 1996)). The Supreme Court recognized in Kumho Tire Co. v. Carmichael that the factors from Daubert will not apply to all cases:

> Our emphasis on the word "may" thus reflects Daubert's description of the Rule 702 inquiry as a flexible one. Daubert makes clear that the factors it mentions do not constitute a definitive checklist or test. And Daubert adds that the gatekeeping inquiry must be tied to the facts of a particular case.

Kumho Tire Co. v. Carmichael, 526 U.S. at 150 (internal quotation marks omitted).

326. In conducting its review under Daubert, a court must focus generally on "principles and methodologies, and not on the conclusions generated." Armeanu v. Bridgestone/Firestone N.

Am., Tire, LLC, No. CIV 05-0619, 2006 WL 4060665, at *11 (D.N.M. Sept. 26, 2006)(Browning, J.)(citing Daubert, 509 U.S. at 595). "Despite this focus on methodology, an expert's conclusions are not immune from scrutiny . . . and the court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." Armeanu v. Bridgestone/Firestone N. Am., Tire, LLC, 2006 WL 4060665, at *11 (alterations and internal quotation marks omitted)(quoting Dodge v. Cotter Corp., 328 F.3d at 1222). The proponent of the expert's opinion testimony bears the burden of establishing that the expert is qualified, that the methodology which he or she uses to support his or her opinions is reliable, and that his or her opinion fits the facts of the case and thus will be helpful to the jury. See Norris v. Baxter Healthcare Corp., 397 F.3d at 881. The Tenth Circuit noted in Hollander v. Sandoz Pharmaceutical Corp., 289 F.3d 1193 (10th Cir. 2002):

> Because the district court has discretion to consider a variety of factors in assessing reliability under Daubert, and because, in light of that discretion, there is not an extensive body of appellate case law defining the criteria for assessing scientific reliability, we are limited to determining whether the district court's application of the Daubert manifests a clear error of judgment or exceeds the bounds of permissible choice in the circumstances. . . . Thus, when coupled with this deferential standard of review, Daubert's effort to safeguard the reliability of science in the courtroom may produce a counter-intuitive effect: different courts relying on the essentially the same science may reach different results.

289 F.3d at 1206. The United States Court of Appeals for the Ninth Circuit noted in Claar v. Burlington Northern Railroad, 29 F.3d 499 (9th Cir. 1994):

> Coming to a firm conclusion first and then doing research to support it is the antithesis of this method. Certainly, scientists may form initial tentative hypotheses. However, scientists whose conviction about the ultimate conclusion of their research is so firm that they are willing to aver under oath that it is correct prior to performing the necessary validating tests could properly be viewed by the district court as lacking the objectivity that is the hallmark of the scientific method.

29 F.3d at 502-03.

> Once reliability is established, however, it is still within the district court's discretion to determine whether expert testimony will be helpful to the trier of fact. In making that determination, the court should consider, among other factors, the testimony's relevance, the jurors' common knowledge and experience, and whether the expert's testimony may usurp the jury's primary role as the evaluator of evidence.

Ram v. N.M. Dep't of Env't, No. CIV 05-1083, 2006 WL 4079623, at *10 (D.N.M. Dec. 15, 2006)(Browning, J.)(citing United States v. Rodriguez-Felix, 450 F.3d 1117, 1123 (10th Cir. 2006)).

327. An untested hypothesis does not provide a scientific basis to support an expert opinion. See Norris v. Baxter Healthcare Corp., 397 F.3d at 887 ("[A]t best, silicone-associated connective tissue disease is an untested hypothesis. At worst, the link has been tested and found to be untenable. Therefore, there is no scientific basis for any expert testimony as to its specific presence in Plaintiff."); In re Breast Implant Litig., 11 F. Supp. 2d 1217, 1228 (D. Colo. 1998)(Sparr, J.)("An untested hypothesis cannot be a scientifically reliable basis for an opinion on causation."). A court is not required "to admit opinion evidence that is connected to existing data only by the ipse dixit of the expert. The court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." Gen. Elec. Co. v. Joiner, 522 U.S. at 146. See Hollander v. Sandoz Pharm. Corp., 289 F.3d at 1209 (noting a lack of similarity between animal studies and human studies); Tyler v. Sterling Drug, Inc., 19 F. Supp. 2d 1239, 1244 (N.D. Okla. 1998)(Cook, J.)("Test results on animals are not necessarily reliable evidence of the same reaction in humans."). Courts have excluded experts' opinions when the experts depart from their own established standards. See Truck Ins. Exch. v. MagneTek, Inc., 360 F.3d 1206, 1213 (10th

Cir. 2004)("The district court noted that [the expert]'s opinion did not meet the standards of fire investigation [which the expert] himself professed he adhered to."); Magdaleno v. Burlington N.R.R., 5 F. Supp. 2d 899, 905 (D. Colo. 1998)(Babcock, J.)("In sum, [the expert]'s methodology is not consistent with the methodologies described by the authors and experts whom [the expert] identifies as key authorities in his field.").

3. Necessity of Evaluating an Issue Under Daubert.

328. The restrictions in Daubert apply to both "novel" expert testimony and "well-established propositions." 509 U.S. at 593 n.11 ("Although the Frye[201] decision itself focused exclusively on 'novel' scientific techniques, we do not read the requirements of Rule 702 to apply specially or exclusively to unconventional evidence."). "Of course, well-established propositions are less likely to be challenged than those that are novel, and they are more handily defended." Daubert, 509 U.S. at 593 n.11. "Indeed, theories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice under Federal Rule of Evidence 201." Daubert, 509 U.S. at 593 n.11.

329. "[W]hen experts employ established methods in their usual manner, a district court need not take issue under Daubert. . . ." Att'y Gen. of Okla. v. Tyson Foods, Inc., 565 F.3d 769, 780 (10th Cir. 2009). "[H]owever, where established methods are employed in new ways, a district court may require further indications of reliability." Att'y Gen. of Okla. v. Tyson Foods, Inc., 565

[201]Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), superseded by rule 702 of the Federal Rules of Evidence, held that, for an expert opinion to be admissible, "the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs." 293 F. at 1014.

F.3d at 780. Whether courts have accepted theories underlying an expert's opinion is a relevant consideration in determining whether expert testimony is reliable. See Att'y Gen. of Okla. v. Tyson Foods, Inc., 565 F.3d at 780 ("The case law indicates that the courts are not unfamiliar with the PCR methodology,[202] and in fact some courts have indicated their acceptance of it.").[203]

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[202]PCR, a "[p]olymerase chain reaction," Att'y Gen. of Okla. v. Tyson Foods, Inc., 565 F.3d at 780, is a widely used method for copying DNA segments, Polymerase Chain Reaction, Wikipedia, https://en.wikipedia.org/wiki/Polymerase_chain_reaction (last visited Nov. 28, 2018).

[203]Much of the focus of current debate about experts is on forensic evidence, which comes in many forms. The challenge to forensic evidence comes from two areas: (i) the federal courts; and (ii) the scientific community. The reports of the National Academies of Science ("NAS") and the President's Council of Advisors on Science and Technology ("PCAST") raise challenges to the reliability of forensic methods. See Executive Office of the President, President's Council of Advisors on Science and Technology, Report to the President, Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods (Sept. 2016); Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council, Strengthening Forensics Science in the United States: A Path Forward (July 2009). There is increasing skepticism of the legal profession's most cherished evidence, including fingerprints, DNA, firearms, and breath tests. See, e.g., President's Council of Advisors on Science and Technology, supra, at 67-110; Committee on Identifying the Needs of the Forensic Sciences Community, supra, at 42-48.

The Court is concerned that the federal judiciary is moving toward a freestanding rule on forensic evidence. The Court is not a big fan of addressing the topic of forensic evidence through rulemaking. No rule, procedures manual, or note is needed to tell judges that there is no certainty with forensic opinions. There is also no reasonable degree of certainty. These opinions are now considered overstated: in the old days -- like last week -- attorneys would routinely ask: "Doctor, is it your opinion, to a reasonable degree of certainty, that the plaintiff's appendix was on the left side of the body?" Experts should no longer testify in this fashion.

The nation does not need another rule. An examination of Article VII -- Opinions and Expert Testimony -- shows six rules: (i) rule 701 -- Opinion Testimony by Lay Witnesses; (ii) rule 702 -- Testimony by Expert Witnesses; (iii) rule 703 -- Bases of an Expert's Opinion Testimony; (iv) rule 704 -- Opinion on an Ultimate Issue; (v) rule 705 -- Disclosing the Facts or Data Underlying an Expert's Opinion; and (vi) rule 706 -- Court-Appointed Expert Witnesses (a bad idea in about all cases). See Fed. R. Evid. 701-06. If the reporter would drop rule 706, perhaps there would be room for a rule pertaining to forensic evidence.

The Court is concerned what a new rule would look like. The judiciary could make its point in a committee note, but without a new rule, there is no need for a new note. The PCAST report does not propose a change to the Evidence Rules. Rather, PCAST proposes a best

LAW REGARDING HEARSAY

330. "Hearsay testimony is generally inadmissible." United States v. Christy, No. CR 10-1534 JB, 2011 WL 5223024, at *5 (D.N.M. Sept. 21, 2011)(Browning, J.)(citing Fed. R. Evid. 802). Rule 801(c) of the Federal Rules of Evidence defines hearsay: "a statement that: (1) the declarant does not make while testifying at the current trial or hearing; and (2) a party offers in evidence to prove the truth of the matter asserted in the statement." Fed. R. Evid. 801(c). Courts deem hearsay generally unreliable and untrustworthy. See Chambers v. Mississippi, 410 U.S. 284, 298 (1973)(noting that hearsay is generally untrustworthy and lacks traditional indicia of reliability); United States v. Lozado, 776 F.3d 1119, 1121 (10th Cir. 2015)("Hearsay is generally inadmissible as evidence because it is considered unreliable." (citing Williamson v. United States, 512 U.S. 594, 598 (1994))); United States v. Console, 13 F.3d 641, 656 (3d. Cir. 1993)(stating

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procedures manual. See President's Council of Advisors on Science and Technology, supra, at 145. It would be better if legal leaders do like Duke University School of Law has done for class actions and the Sedona Conference has done for electronic discovery. See Class-Action Settlement Conference, Duke Law, https://law.duke.edu/judicialstudies/conferences/oct2016/ (last visited Jan. 7, 2019); The Sedona Conference Working Group Series, The Sedona Conference, https://thesedonaconference.org/wgs (last visited Jan. 7, 2019). Rather than a new rule or note, the Court believes that a best practices manual -- prepared by professional leaders who come together to write -- and not the judiciary -- would be the better approach.

The Court expects several difficulties with a new rule. The first difficulty with any rule on forensic evidence will be determining to whom it should apply. A new rule would presumably apply to forensic witnesses' testimony. Such witnesses include people testifying about evidence through scientific means, by comparing patterns, or by "scientific or technical." Evidence at 637, Black's Law Dictionary (9th ed. 2009). After the Court and the bar have identified the universe of experts to whom the rule applies or the best practices apply, the new rules' requirements must be determined. An expert must already satisfy all of rule 702's requirements. Under a new rule, the expert will also need to satisfy all of the new requirements. With more hurdles, the chances of exclusion or limiting are enhanced. Rule 702's requirements, however, are enough, and the law should not require more.

hearsay is "'inherently untrustworthy'" because of the lack of an oath, presence in court, and cross examination quoting United States v. Pelullo, 964 F.2d 193, 203 (3rd Cir. 1992))). Testimonial proof is necessarily based upon the human senses, which can be unreliable. See 5 Jack Weinstein & Margaret Berger, Weinstein's Federal Evidence § 802.02[1][b], at 802-5 (Joseph McLaughlin ed., 2d ed. 2017)("Weinstein's Federal Evidence"). The Anglo-American tradition uses three devices to illuminate inaccuracies in the testimonial proof: (i) the oath; (ii) personal presence at trial; (iii) and cross examination. See Weinstein's Federal Evidence § 802.02[2][a], at 802-5. Courts view hearsay evidence as unreliable because it is not subject to an oath, personal presence in court, or cross examination, see, e.g., United States v. Console, 13 F.3d at 656; it is difficult to evaluate the credibility of out-of-court statements when the three safeguards mentioned above are unavailable, see Weinstein's Federal Evidence § 802.02[3], at 802-6 to -7.

331. "Hearsay within hearsay" is admissible only "if each part of the combined statements conforms with an exception to the rule." Fed. R. Evid. 805. See, e.g., United States v. DeLeon, 316 F. Supp. 3d 1303, 1306 (D.N.M. 2018)(Browning, J.)(noting, after concluding that rule 803(8) provides an exception for law enforcement reports, that a hearsay issue remains regarding the statements within the reports); Wood v. Millar, No. CIV 13-0923 RB/CG, 2015 WL 12661926, at *4 (D.N.M. Feb. 19, 2015)(Brack, J.)(stating that witness statements in police reports, to which rule 803(8) applies, may be admissible under hearsay exclusions other than rule 803(8)); Montoya v. Sheldon, No. CIV 10-0360 JB/WDS, 2012 WL 6632524, at *7 (D.N.M. Oct. 31, 2012)(Browning, J.)(excluding medical records, which themselves were inadmissible hearsay, although the statements within the medical records were opposing party statements). A statement that is otherwise hearsay, however, may be admissible for a purpose, such as impeachment, other

than to prove the truth of the matter asserted. See United States v. Caraway, 534 F.3d 1290, 1299 (10th Cir. 2008)("We have already explained why the content of the statement, if used substantively, would be inadmissible hearsay. If admitted for impeachment purposes, however, it is not hearsay."). Likewise, "'[i]f the significance of an offered statement lies solely in the fact that it was made, no issue is raised as to the truth of anything asserted, and the statement is not hearsay.'" Echo Acceptance Corp. v. Household Retail Servs., Inc., 267 F.3d 1068, 1087 (10th Cir. 2001)(quoting Fed. R. Evid. 801 advisory committee's note). Statements in the latter category include verbal acts --

> "statement[s] offered to prove the words themselves because of their legal effect (e.g., the terms of a will)." Black's Law Dictionary (10th ed. 2014). "A contract, for example, is a form of verbal act to which the law attaches duties and liabilities and therefore is not hearsay." *Mueller v. Abdnor*, 972 F.2d 931, 937 (8th Cir. 1992). *See also Cagle v. The James St. Grp.*, 400 F. App'x 348, 356 (10th Cir. 2010).

Farley v. Stacy, No. 14-CV-0008-JHP-PJC, 2015 WL 3866836, at *5 (N.D. Okla. June 23, 2015)(Payne, J.), aff'd, 645 F. App'x 684 (10th Cir. 2016)(unpublished).

1. Rule 803(3).

332. One of the hearsay exceptions -- rule 803(3) -- excepts from the general bar on hearsay "[a] statement of the declarant's then existing state of mind [or] emotion." Fed. R. Evid. 803(3). Rule 803(3) permits the introduction of "hearsay . . . , even though the declarant is available as a witness," for a statement of the declarant's "[t]hen existing mental, emotional, or physical condition":

> A statement of the declarant's then existing state of mind, emotion, sensation, or physical condition (such as intent, plan, motive, design, mental feeling, pain, and bodily health), but not including a statement of memory or belief to prove the fact remembered or believed unless it relates to the execution, revocation, identification, or terms of declarant's will.

Fed. R. Evid. 803(3).

333. For the statement to qualify under rule 803(3), it "must relate to the declarant's state of mind during" the incident in question. United States v. Netschi, 511 F. App'x 58, 61 (2d Cir. 2013)("To admit statements of one's state of mind with regard to conduct that occurred . . . earlier as in this case would significantly erode the intended breadth of this hearsay exception." (quoting United States v. Cardascia, 951 F.2d 474, 488 (2d Cir. 1991)(internal quotation marks omitted). This requirement is not to say that the statement must be said at the very moment of the incident, but for intent to be proved, it must be "contemporaneous" to the act. Mutual Life Ins. Co. of New York v. Hillmon, 145 U.S. 285, 295 (1892). To be contemporaneous and therefore admissible under the present state-of-mind exception, a statement must be "part of a continuous mental process." United States v. Cardascia, 951 F.2d at 488. In addition to the requirements that the statement be contemporaneous to the incident at hand and relevant to the case's issues, it must also be established that there was no opportunity for the declarant to "fabricate or to misrepresent his thoughts." United States v. Jackson, 780 F.2d 1305, 1315 (7th Cir. 1986)). The intent statements must reveal information or details about the future, which has been contrasted with memory statements or looking back to the past. See Shepard v. United States, 290 U.S. 96, 104 (1933). When statements entail issues of looking into the past combined with other concerns, it can often be too confusing for a jury to extract, upsetting the balance of advantage, and ultimately making the evidence inadmissible. See Shepard v. United States, 290 U.S. at 104. "The most obvious risk of prejudice is that the jury will consider the hearsay statement not as proof of state of mind and the subsequent conduct of the declarant, but rather for the truth of the facts that are related in the

statement." Stephen A. Saltzburg et al., Fed. Rules of Evidence Manual § 803.02, at 4-803 (11th ed. 2017).

2. Rule 803(19).

334. Hearsay statements are also permissible pursuant to rule 803(19), if the statement concerns "[a] reputation among a person's family by blood, adoption, or marriage -- or among a person's associates or in the community -- concerning the person's birth, adoption, legitimacy, ancestry, marriage, divorce, death, relationship by blood, adoption, or marriage, or similar facts of personal or family history." Fed. R. Evid. 803(19). As the Advisory Committee Note highlights, rule 803(19)

> is concerned with matters of personal and family history. Marriage is universally conceded to be a proper subject of proof by evidence of reputation in the community. 5 Wigmore § 1602. As to such items as legitimacy, relationship, adoption, birth, and death, the decisions are divided. *Id.* § 1605. All seem to be susceptible to being the subject of well founded repute. The "world" in which the reputation may exist may be family, associates, or community. This world has proved capable of expanding with changing times from the single uncomplicated neighborhood, in which all activities take place, to the multiple and unrelated worlds of work, religious affiliation, and social activity, in each of which a reputation may be generated. *People v. Reeves*, 360 Ill. 55, 195 N.E. 443 (1935); *State v. Axilrod*, 248 Minn. 204, 79 N.W.2d 677 (1956); Mass. Stat. 1947, c. 410, M.G.L.A. c. 233 § 21A; 5 Wigmore § 1616. The family has often served as the point of beginning for allowing community reputation. 5 Wigmore § 1488.

Fed. R. Evid. 803 advisory committee's note. Weinstein's Federal Evidence further articulates the need for this exception:

> Other evidence of family matters is frequently unavailable, and it is likely that these matters have been sufficiently inquired about and discussed with persons who have personal knowledge so that a trustworthy consensus has been reached. No requirement of unavailability is imposed, because of the likelihood that on questions of this kind -- such as birth, adoption, and legitimacy -- other available witnesses would also be testifying from reputation, rather than personal knowledge. . . .

> The rule does not require that reputation in question have been formulated before the controversy arose, since a false reputation as to birth, death, or marriage is not likely to arise at any time. However, there is a greater possibility of inaccuracy concerning other aspects of family history, such as an ancestor's travels.

5 Jack B. Weinstein & Margaret A. Berger, Weinstein's Federal Evidence, § 803.21[2] at 803-140 (Mark S. Brodin ed., 2d ed. 2018).

335. Rule 803(19) provides that reputation evidence is admissible to prove personal or family history, and that family members or close associates can establish the reputation. See Fed. R. Evid. 803(19); Saltzburg, supra, at 803-93. Reputation in the community often serves to provide evidence of marriage. See 5 Wigmore on Evidence § 1602, at 569 (Chadbourn rev. 1974)("[I]t has been universally conceded that reputation in the community is always admissible to evidence the fact of marriage; there does not seem to have been any time when this was disputed."). The Advisory Committee on Evidence Rules notes that this exception contemplates, as proper subjects of proof, marriage, legitimacy, relationship, adoption, birth, and death. See Fed. R. Evid. 803(19) advisory committee's notes. See United States v. Jean-Baptiste, 166 F.3d 102, 110 (2d Cir. 1999)("[Rule 803(19)] plainly contemplates that members of a family may testify with regard to the common understanding as to the birth of another family member."). No matter the purpose, reputation testimony requires a reliable foundation. See Blackburn v. United Parcel Serv., Inc., 179 F.3d 81, 100-01 (3d Cir. 1999)(concluding that, to admit reputation evidence among a work community, the proponent must establish that reputation testimony "arises from sufficient inquiry and discussion among persons with personal knowledge of the matter" to constitute trustworthy reputation; rumors and speculation are insufficient). The exception's rationale "is that 'the natural effusions of those who talk over family affairs . . . are trustworthy.'" Saltzburg, supra, at 803-93

(quoting Johnson v. State, 737 S.W.2d 901, 905 (Tex. App. 1987), aff'd in part and vacated on other grounds in part, 784 S.W.2d 47 (Tex. Crim. App. 1990)(en banc)(construing the state counterpart to Federal Rule 803(19))).

3. Rule 803(20).

336. Under the rule 803(20) hearsay exception, an out-of-court statement is admissible if the statement concerns "reputation in a community -- arising before the controversy -- concerning boundaries of land in the community or customs that affect the land, or concerning general historical events important to that community, state, or nation." Fed. R. Evid. 803(20). The advisory committee's note to rule 803(20) states that,

> [t]he first portion of Exception [paragraph] (20) is based upon the general admissibility of evidence of reputation as to land boundaries and land customs, expanded in this country to include private as well as public boundaries. McCormick § 299, p. 625.[204] The reputation is required to antedate the controversy, though not to be ancient. The second portion is likewise supported by authority, *id.*, and is designed to facilitate proof of events when judicial notice is not available. The historical character of the subject matter dispenses with any need that the reputation antedate the controversy with respect to which it is offered.

Fed. R. Evid. 803 advisory committee's note. The Federal Rules of Evidence Manual states that,

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[204]According to McCormick on Evidence,

> [i]n England the use of the evidence is limited to public boundaries or other public rights. Nicholls v. Parker, (1805) 104 Eng. Rep. 629 (K.B.). But in this country, except in a few states, it extends also to private boundaries. Hail v. Haynes, 312 Ky. 357, 227 S.W.2d 918 (1950); Hemphill v. Hemphill, 138 N.C. 504, 51 S.E. 42 (1905). *See* 5 Wigmore, Evidence § 1587. The exception has been expanded on occasion beyond evidence of reputation and admitted hearsay statements of specific individuals. Kay Corp. v. Anderson, 72 Wash. 2d 879, 436 P.2d 459 (1967) (statement of out-of-court declarant as to location of boundary admitted under exception).

McCormick on Evidence § 322, at 553 (Kenneth S. Broun ed., 7th ed. 2013).

> [t]o qualify for admission under Rule 803(20), the testimony must report a general consensus in the community, an assertion of the group as opposed to one or a few of its constituents. The fact that the information has been considered by and was subject to the general scrutiny of the community is an essential guarantee of reliability for the exception. Consequently, if the statement is a personal assertion of a single declarant, it will not be admitted under Rule 803(20).

Saltzburg, supra, at 803-94. The Advisory Committee Note to rule 803 discusses the rationale behind reputation-based exceptions to the rule against hearsay:

> Trustworthiness in reputation evidence is found "when the topic is such that the facts are likely to have been inquired about and that persons having personal knowledge have disclosed facts which have thus been discussed in the community; and thus the community's conclusions if any has been found, is likely to be a trustworthy one." 5 Wigmore § 1580. . . . On this common foundation, reputation as to land boundaries, customs, general history, character, and marriage have come to be regarded as admissible. The breadth of the underlying principle suggests the formulation of an equally broad exception, but tradition has in fact been much narrower and more particularized, and this is the pattern of these exceptions in the rule.

Fed. R. Evid. 803 advisory committee's note.

337. To have significant probative value to qualify for admission under rule 803(20), the matter in question "must be one of general interest, so that it can accurately be said that there is a high probability that the matter underwent general scrutiny as the community reputation was formed." McCormick on Evidence § 322, at 554 (Kenneth S. Broun ed., 7th ed. 2013)(quoted by the Honorable Bruce S. Jenkins, United States District Judge for the District of Utah, in Ute Indian Tribe v. State of Utah, 521 F. Supp. 1072, 1049 (D. Utah 1981)(Jenkins, J.), rev'd in part on other grounds, 716 F.2d 1298 (10th Cir. 1983)). See Mont. Power Co. v. Fed. Power Comm'n, 185 F.2d 491 (D.C. Cir. 1950)(admitting newspaper accounts and histories describing river's navigable nature during the nineteenth century to prove river's reputation for navigability during the nineteenth century). Wigmore states this "general interest" component even more emphatically:

> [T]he facts for which such an opinion or reputation can be taken as trustworthy must . . . be such facts as have been of interest to all members of the community as such, and therefore have been so likely to receive general and intelligent discussion and examination by competent persons, so that the community's received opinion on the subject cannot be supposed to have reached the condition of definite decision until the matter had gone, in public belief, beyond the stage of controversy and had become settled with fair finality.

5 Wigmore on Evidence, supra, § 1598, at 564-65.

338. Regarding the "general historical events important to [the] community" clause, Fed. R. Evid. 803(20), the Honorable Marvin E. Frankel, United States District Judge for the Southern District of New York, stated: "It is generally recognized that reputation is acceptable as proof of historical events of general interest in the community, despite the fact that such evidence is hearsay." Pan Am. World Airways, Inc. v. Aetna Cas. & Sur. Co., 368 F. Supp. 1098, 1104 n.5 (S.D.N.Y. 1973)(Frankel, J.). Hence, the rationale for this clause is: (i) a need for the evidence, because of the likelihood that other evidence cannot be obtained; and (ii) reliability, because the testimony represents the consensus of the community.[205] See Advisory Committee's Note to

[205]There is scant authority on the admissibility of reputation concerning general history. Legal writers attribute this scarcity to the fact that courts frequently admit historical writings under the ancient documents exception, see Fed. R. Evid. 803(16), or the business records exception, see Fed. R. Evid. 803(11), or because facts about history often qualify for judicial notice or are admitted under the exception for learned treatises, see Fed. R. Evid. 803(18). See 5 Weinstein's Federal Evidence § 803.22, at 803-143 (2018); Taylor S. Fielding, Evidence Issues in Indian Law Cases, 2 Am. Ind. L. J. 285, 303 (2017). Taylor Fielding, Tribal Prosecutor for the Kootenai Tribe of Idaho, argues that these exceptions reflect a bias against oral tradition evidence, generally based on the assumption that written records are a more accurate reflection of an event than oral history. See Fielding, supra, at 303. Further examples of such bias, according to Mr. Fielding, are seen in rule 803's exceptions for religious organization records, see Fed. R. Evid. 803(11), marriage and baptism certificates, see Fed. R. Evid. 803(12), and personal family histories contained in family Bibles, Fed. R. Evid. 803(13). Fielding, supra, at 303. Anastasia Winslow, Professor of Law at Seton Hall University School of Law, notes that such exceptions are not surprising, because "[t]he law implicitly embodies the religious premises of the dominant culture." Anastasia P. Winslow, Sacred Standards: Honoring the Establishment Clause in Protecting Native American Sacred Sites,

Original Rule, reprinted at § 803 App. 01[2] ("[Rule 803(20)] is designed to facilitate proof of events when judicial notice is not available."). See Pan Am. World Airways, Inc. v. Aetna Cas. & Sur. Co., 368 F. Supp. at 1104 ("We have made pragmatic judgments in ruling from time to time that dubious or suspect evidence should be taken from all sides, however skeptically, when the practical alternative was to have no evidence of any kind.").

339. Courts are inclined to permit testimony pursuant to rule 803(20), although indicia of bias limits its probative value. See United States v. Belfast, 611 F.3d 783, 794 (11th Cir. 2010); Ute Indian Tribe v. State of Utah, 521 F. Supp. at 1075. In Ute Indian Tribe v. State of Utah, which involved a dispute about reservation boundaries, Judge Jenkins concluded that "reputation in a non-Indian community as to Indian boundaries, rights, etc., is indeed a treacherous ground for decision," because reputation evidence admitted pursuant to rule 803(20) is reliable only when it is of general interest, and the American Indian boundaries in that case were not of general interest before the dispute arose. 521 F. Supp. at 1149 ("While, as counsel for the counties points out, [boundary] reputation evidence is generally admissible in federal court under Rule 803(20), its reliability in these specific circumstances is suspect."). In United States v. Belfast, the United States Court of Appeals for the Eleventh Circuit affirmed a conviction for torture offenses

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38 Ariz. L. Rev. 1291, 1301 (1996). Therefore, Professor Winslow suggests, because the nature of many Indian traditions, practices, and religious activities are foreign to the courts, litigants should expect evidence rules to favor Western record-keeping practices, which have a preferred position in society. See Winslow, supra, at 1301. Dr. Peter Whiteley, Professor of Anthropology at the American Museum of Natural History's Richard Gilder Graduate School, asserts that "the Bible's very textuality enables it to be conceptualized as including history more easily than is the case with oral mythology, owning to the engrained -- though largely unexamined -- ideas about the supposed instability and unreliability of oral narratives in the Western cult of the written word." Peter M. Whiteley, Archaeology and Oral Tradition: The Scientific Importance of Dialogue, 67 Am. Antiquity 405, 407 (2002).

committed in Liberia while the defendant's father was Liberia's President. See 611 F.3d at 783. The United States Court of Appeals for the Eleventh Circuit held that the district court did not abuse its discretion in admitting testimony by a Liberia Desk Officer at the United States Department of State when the testimony was limited to Liberian political party descriptions. See 611 F.3d at 821. The "testimony concerned nothing more than historical background about Liberia and its political structure, as necessary to educate the jury," and thus satisfied rule 803(20). United States v. Belfast, 611 F.3d at 821.

4. Rule 803(21).

340. Hearsay statements are admissible under 803(21) when such statements concern "reputation among a person's associates or in the community concerning the person's character."[206] Fed. R. Evid. 803(21). According to the Advisory Committee's Note, rule 803(19)

> recognizes the traditional acceptance of reputation evidence as a means of proving human character. McCormick §§ 44, 158. The exception deals only with the hearsay aspect of this kind of evidence. Limitations upon admissibility based on other grounds will be found in Rules 404, relevancy of character evidence generally, and 608, character of witness. The exception is in effect a reiteration, in the context of hearsay, of Rule 405(a).

Fed. R. Evid. 803 advisory committee's note.

341. For a statement to qualify under the rule 803(20) hearsay exception, the offering witness must demonstrate that he or she "knows the person and is truly familiar with the

[206]Reputation evidence comes within the rule against hearsay, because it consists of a summary of views expressed outside the courtroom that is offered to prove the truth of the matter asserted. See Michelson v. United States, 335 U.S. 469, 477 (1948)(concluding that, when the defendant elects to initiate a character inquiry, not only is the defendant permitted to call witnesses to testify from hearsay, but such witnesses are not allowed to base their testimony on anything but hearsay).

'community' in which the reputation has been formed, and that the basis of the reputation is one that is likely reliable." Blackburn v. United Parcel Serv., Inc., 179 F.3d 81, 101 (3d Cir. 1999). The character evidence hearsay exception for reputation as to character ensures that a hearsay objection will not bar reception of otherwise inadmissible, but sometimes desirable, evidence. See United States v. Penson, 896 F.2d 1087, 1092-93 (7th Cir. 1990)(concluding that a co-conspirator's testimony that "he knew of a man named Keith who in turn had a customer named Gene 'who had a truck driver [defendant] that had provided him with this exact service'" was admissible to show defendant's reputation within the drug-trafficking community). Cf. United States v. Arroyo, 406 F.3d 881, 887-88 (7th Cir. 2005)(holding that informant's statement that defendant was believed to have "ripped" two kilos of cocaine during a drug sale was not admissible under rule 803(21), because statement was not related to "reputation of [defendant's] character among associates or in the community," but to a rumor about a specific prior act and others' intentions to harm informant); Dick v. Phone Directories Co., Inc., 397 F.3d 1256, 1266 (10th Cir. 2005)(holding that hearsay testimony, that defendant's office was known as "the lesbian factory," was not admissible under rule 803(21), because testimony concerned neither a person nor her character).

5. Rule 807.

342. Rule 807, the Residual Exception to the rule against hearsay, provides that,

> [u]nder the following circumstances, a hearsay statement is not excluded by the rule against hearsay even if the statement is not specifically covered by a hearsay exception in Rule 803 or 804: (1) the statement has equivalent circumstantial guarantees of trustworthiness; (2) it is offered as evidence of a material fact; (3) it is more probative on the point for which it is offered than any other evidence that the proponent can obtain through reasonable efforts; and (4) admitting it will best serve the purposes of these rules and the interests of justice.

Fed. R. Evid. 807. Furthermore, this rule requires that "the statement is admissible only if, before the trial or hearing, the proponent gives an adverse party reasonable notice of the intent to offer the statement and its particulars, including the declarant's name and address, so that the party has a fair opportunity to meet it." Fed. R. Evid. 807(b).[207] The United States Court of Appeals for the First Circuit has summarized the policies that the residual hearsay exception serves:

1. To provide sufficient flexibility to permit the courts to deal with new and unanticipated situations.

2. To preserve the integrity of the specifically enumerated exceptions.

3. To facilitate the basic purpose of the Federal Rules of Evidence: truth ascertainment and fair adjudication of controversies.

United States v. Sposito, 106 F.3d 1042, 1048 (1st Cir. 1997)(citing 11 Moore's Federal Practice § 803(24)[7] (2d ed. 1994 & Supp.1996-97)). These purposes are consistent with the suggestions of many of the leading evidence scholars over the past century and further rule 807's objective to make relevant evidence admissible. See United States v. Moore, 824 F.3d 620, 624 (7th Cir. 2016)("The purpose of Rule 807 is to make sure that reliable, material hearsay evidence is admitted, regardless of whether it fits neatly into one of the exceptions enumerated in the Rules of Evidence.").

343. Given that rule 807 authorizes hearsay admission not within the precise confines of a recognized exception, the courts interpret the residual exception to admit hearsay evidence of high probative value in individual situations, but not to create new exceptions. See United States

[207]Rule 807 was added to the Federal Rules of Evidence in 1997, and represents a combination of the virtually identical former rules 803(24) and 804(b)(5). See Weinstein's Federal Evidence, supra, § 807.02 at 807-4 (citing Advisory Committee Note to Rule 807).

v. Doe, 860 F.2d 488, 491 (1st Cir. 1988)(concluding that the residual exception criteria "involve considerations which are very trial-specific, such as the relative probative value of the hearsay statement and whether admitting the statement will best serve 'the interests of justice'")(quoting Fed. R. Evid. 803(24))). But cf. Garner v. United States, 439 U.S. 936, 940 n.3, (1978)(Stewart, J., dissenting)("It seems to me open to serious doubt whether [the residual exception] was intended to provide case-by-case hearsay exceptions, or rather only to permit expansion of the hearsay exceptions by categories."). The residual hearsay exception is "meant to be reserved for exceptional cases," and is "not intended to confer 'a broad license' on trial judges 'to admit hearsay statements that do not fall within one of the other exceptions contained in rules 803 and 804(b).'" Conoco Inc., v. Dep't of Energy, 99 F.3d at 392 (quoting S. Rep. No. 94-199, at 20 (1975)). See United States v. Trujillo, 136 F.3d 1388, 1395-96 (10th Cir. 1998)(stating that, because residual hearsay exceptions are intended for "exceptional circumstances," offerors of such evidence bear a "heavy burden" of presenting the trial court with sufficient indicia of trustworthiness). Hence, evidence admitted pursuant to rule 807 must have "circumstantial guarantees of trustworthiness" comparable to those of the enumerated rule 803 exceptions.[208] United States v. Harrison, 296 F.3d

[208]Categories of information addressed in the rule 803's specific hearsay exceptions "have attributes of trustworthiness not possessed by the general run of hearsay statements that tip the balance in favor of introducing the information" despite its hearsay character. United States v. Fernandez, 892 F.2d 976, 981 (11th Cir. 1989). Moreover, several federal Courts of Appeals have concluded that guarantees of trustworthiness must be equivalent to statements made subject to cross-examination, statements made under a belief of impending death, statements against interest, and statements of personal or family history. See United States v. Banks, 514 F.3d 769, 777-78 (8th Cir. 2008)(observing that one way to approach rule 807 analysis is to compare circumstances of statement at issue to "the closest hearsay exception"); United States v. Fernandez, 892 F.2d at 981 (considering "those statements that are similar though not identical to hearsay clearly falling under one of the four codified exceptions, if the statements otherwise bear indicia of trustworthiness equivalent to those exceptions"). The trial judge's discretion in this regard is

994, 1004-07 (10th Cir. 2002)(holding that child sexual abuse victim's statement to Federal Bureau of Investigation ("FBI") agent had circumstantial guarantees of trustworthiness, even though victim recanted her statement, because the statement was consistent with her earlier statements and was specific, and victim was old enough to have the ability to remember the events). See United States v. Trujillo, 136 F.3d at 1395-96; United States v. Tome, 61 F.3d 1446, 1453 (10th Cir. 1995)(concluding that child's statement to caseworker identifying abuser, made a year after attack, lacked guarantees of trustworthiness); United States v. Farley, 992 F.2d 1122, 1126 (10th Cir. 1993). In United States v. Farley, for example, the Tenth Circuit admitted, pursuant to rule 807, a child sexual abuse victim's assault account, as given to victim's mother, even though some statements were made the morning after the assault, because the victim was still suffering pain and distress from the assault, the victim employed childish terminology, and the victim's youth reduced the likelihood that the statements were fabricated. See 992 F.2d at 1126.

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broad. See United States v. Harwood, 998 F.2d 91, 98 (2d Cir. 1993)(concluding that the residual exception applies only in rare cases and that a trial court's decision not to apply it can be reversed only for abuse of discretion); United States v. Mokol, 939 F.2d 436, 438 (7th Cir. 1991)(concluding that the judge has significant discretion in ruling upon admissibility); SEC v. First City Fin. Corp., 890 F.2d 1215, 1225 (D.C. Cir. 1989)(stating that particular deference should be given to trial court's determination, because the exception depends so heavily on judgment of reliability). Notably, the United States Court of Appeals for the Second Circuit considers the trustworthiness of hearsay offered under the residual hearsay exception in terms of the extent to which the statement is prone to the four classic hearsay risks of (i) insincerity, (ii) faulty perception, (iii) faulty memory, and (iv) faulty narration, each of which decreases the reliability of the inference from the statement made to the conclusion for which it is offered. See Schering Corp. v. Pfizer, Inc., 189 F.3d 218, 232-33 (2d Cir. 1999)(identifying additional class of risk of methodological error for survey evidence); Headley v. Tilghman, 53 F.3d 472, 477 (2d Cir. 1995)(referring to classic hearsay "risks of insincerity, distorted perception, imperfect memory, and ambiguity of utterance").

344. In determining the trustworthiness of hearsay offered under the residual exception, the Tenth Circuit considers factors such as: (i) the statement's character; (ii) whether the statement is written or oral; (iii) the parties' relationship; (iv) the declarant's probable motivation in making the statement; and (v) the circumstances under which the statement is made. See United States v. Lawrence, 405 F.3d 888, 902 (10th Cir. 2005)(concluding that statements made to FBI agents by physician at defendant's clinic, including that he did not believe he was legally required to be at the clinic to supervise medical work, were not admissible under rule 807, in defendant's Medicare fraud trial, because statements had no circumstantial guarantees of trustworthiness, statements were taken shortly after FBI executed search warrant on clinic, and physician was the subject of the same investigation that eventually led to charges against defendant); Fed. Trade Comm'n v. Kuykendall, 312 F.3d 1329, 1343 (10th Cir. 2002)(concluding that consumer declarations and complaints had sufficient circumstantial guarantees of trustworthiness to warrant admission under rule 807 in a civil contempt proceeding arising from the defendants' violation of a permanent injunction, because they were made under oath and subject to penalty of perjury). For admissibility under rule 807, a statement must be "more probative on the point for which it is offered than any other evidence that the proponent can obtain through reasonable efforts."[209] Fed. Trade Comm'n v. Kuykendall, 312 F.3d at 1343 (concluding that consumer declarations and complaints were trustworthy and most probative evidence available, and therefore admissible under rule 807,

[209]The "more probative" requirement, however, is not interpreted "with cast-iron rigidity." United States v. Harrison, 296 F.3d at 1006-07 (concluding that district court could properly rule that child sexual abuse victim's statement to FBI agent was most probative available evidence with respect to details not disclosed in other statements)(quoting Weinstein's Federal Evidence, supra, § 807.3[3][a], at 807-21)).

provided defendants had adequate notice); United States v. Zamora, 784 F.2d 1025, 1031 (10th Cir. 1986)(concluding that hearsay statements were properly excluded in absence of showing of statement's probative value or any effort to obtain information from other sources). The Tenth Circuit considers a statement "more probative" if the district court determines that the hearsay is relevant and reliable, and that no other evidence, or little other evidence, is available on the same point. Marsee v. U.S. Tobacco Co., 866 F.2d 319, 324-25 (10th Cir. 1989)(concluding that reports were not admissible, because much of their contents were already admitted through expert testimony).

345. Rule 807 requires the district court to consider the availability of other admissible evidence through reasonable efforts, which depend on matters such as the importance of the evidence and the proponent's ability to provide it. See Calderon v. Presidio Valley Farmers Ass'n, 863 F.2d 384, 391-92 (5th Cir. 1989)(concluding that answers to interrogatories were admissible pursuant to rule 807, because relevant records were lost or destroyed, trial was held several years after violations took place, and witnesses were illiterate); United States v. Shaw, 824 F.2d 601, 610 (8th Cir. 1987)(stating that exceptional circumstances generally exist when child relates abuse details to adult). Courts must consider the need for the evidence in light of the basic assumption underlying the rule against hearsay -- that statements made directly in the courtroom are more reliable than hearsay; in other words, courts must balance need against trustworthiness. See United States v. Harrison, 296 F.3d at 1004-07. Admission of evidence under the residual exception must accord with "the purposes of these rules and the interests of justice." New England Mut. Life Ins. Co. v. Anderson, 888 F.2d 646, 650-51 (10th Cir. 1989)(concluding that the district court properly excluded statements reported in newspaper article, because the district court found no guarantees

of trustworthiness and the plaintiff failed to show that admission of the article without opportunity to cross-examine witness would serve interests of justice); Marsee v. U.S. Tobacco Co., 866 F.2d 319, 325 (10th Cir. 1989)(stating that the interests of justice did not require admission of reports at issue).

LAW REGARDING AMERICAN INDIAN ORAL TRADITION EVIDENCE

346. American Indian oral tradition evidence "consist[s] of oral accounts handed down from father to son in continuity -- from generation to generation from time immemorial. Traditionally, this has been the principal tribal record of the history of all Indian tribes." Pueblo de Zia v. United States, 165 Ct. Cl. at 504. Because oral tradition evidence purports to prove historical events based on out-of-court statements offered for their truth, such evidence implicates reliability concerns attendant to hearsay and thus may be inadmissible in courts of law. See Sokaogon Chippewa Community v. Exxon Corp., 2 F.3d 219, 222 (7th Cir. 1993)("The oral tradition of a promised reservation is not *evidence*, that is, evidence admissible in a court of law." (emphasis in original)). Hearsay is an out-of-court statement "offer[ed] in evidence to prove the truth of the matter asserted in the statement," Fed. R. Evid. 801(c), and is generally inadmissible as evidence "because it is considered unreliable," United States v. Lozado, 776 F.3d 1119, 1121 (10th Cir. 2015)(citing Williamson v. United States, 512 U.S. 594, 598 (1994)). See Fed. R. Evid. 801(c) (defining hearsay as an out-of-court statement offered "to prove the truth of the matter asserted in the statement"). Although the rule against hearsay is subject to numerous exceptions, see Fed. R. Evid. 801-807, neither the Tenth Circuit nor any other Court of Appeals has permitted American Indian oral tradition evidence pursuant to any codified exception to the rule against hearsay.

347. American Indian oral tradition evidence is seen primarily in (i) land claims and (ii) funerary repatriation claims.[210] Land claims require Tribal claimants to show that they have occupied the land in question for a significant period, which claimants can often accomplish only through oral tradition evidence. See Sokaogon Chippewa Cmty. v. Exxon Corp., 2 F.3d at 222; Zuni Tribe of N.M. v. United States, 12 Cl. Ct. at 616; Confederated Tribes of the Warm Springs Reservation of Or. v. United States, 177 Ct. Cl. at 204; Pueblo de Zia v. United States, 165 Ct. Cl. at 505; Coos Bay Indian Tribe v. United States, 87 Ct. Cl. at 152-53; Assiniboine Indian Tribe v. United States, 77 Ct. Cl. 347, 368 (1933). Furthermore, Tribal claimants may use oral tradition evidence to repatriate sacred funerary objects or human remains pursuant to the Native Graves Protection and Repatriation Act of 1990, 25 U.S.C. §§ 3001-3005 ("NAGPRA"). Bonnichsen v. United States, 367 F.3d at 875. NAGPRA places oral tradition evidence on the same plane as documentary evidence by requiring the return of funerary objects upon a showing of cultural affiliation, by a preponderance of the evidence, based on "geographical, kinship, biological, archaeological, anthropological, linguistic, folkloric, oral traditional, historical, or other relevant

[210]Admission of oral tradition evidence is further seen in at least one case wherein Tribal claimants attempt to use such evidence to prove their status as an Indian Tribe before proceeding with a substantive claim. See Mashpee Tribe v. New Seabury Corp., 427 F. Supp. 899, 902-03 (D. Mass. 1977)(Skinner, J.)(discussing whether the Mashpee people were a "tribe" under the Indian Nonintercourse Act, 25 U.S.C. § 177). Moreover, the Honorable George H. Boldt, former United States District Judge for the Western District of Washington, admitted and relied on undisputed oral traditional evidence regarding Tribal activities such as hunting and fishing, as well as the locations where those activities took place, to support his decision to uphold Tribal fishing rights under several treaties. See United States v. Washington, 384 F. Supp. 352, 379 (W.D. Wash. 1974)(Boldt, J.)("[O]ral testimony of Yakima tribal members educated in Yakima history and customs by tribal elders, was not controverted in the evidence and is found by the court to be reasonable and credible factual data regarding relevant aspects of Yakima Indian life at and prior to treaty time.").

information or expert opinion." 25 U.S.C. § 3005(a)(4). The statute makes oral tradition evidence part of the adjudicative process and expressly treats hearsay evidence as admissible by requiring that the decision maker must consider "oral tradition" in evaluating the strength of a claim of cultural affiliation. 25 U.S.C. § 3005(a)(4). See Deborah L. Threedy, Claiming the Shields: Law, Anthropology, and the Role of Storytelling in a NAGPRA Repatriation Case Study, 29. J. Land, Resources & Envt'l. L. 91, 109 (2009).

1. Admitted, Discredited Oral Tradition Evidence.

348. The American courts that have admitted or considered uncontroverted oral tradition evidence have historically discredited this evidence. See Bonnichsen v. United States, 367 F.3d at 881-82; Sokaogon Chippewa Cmty. v. Exxon Corp., 2 F.3d at 222; Coos Bay Indian Tribe v. United States, 87 Ct. Cl. at 152-53; Assiniboine Indian Tribe v. United States, 77 Ct. Cl. at 368. Several United States Court of Claims and United States Court of Appeals decisions address oral tradition evidence although such discussion is limited to passing mention in dicta. See Bonnichsen v. United States, 367 F.3d at 881-82; Sokaogon Chippewa Cmty. v. Exxon Corp., 2 F.3d at 222; Coos Bay Indian Tribe v. United States, 8 Ct. Cl. at 152-53; Assiniboine Indian Tribe v. United States, 77 Ct. Cl. at 368. What these cases share is the decision to give no weight to oral tradition evidence.

a. United States Court of Claims Cases.

349. In Assiniboine Indian Tribe v. United States, Tribal claimants sought the right of occupancy to two tracts of land, one of which fell under the Fort Laramie Treaty of 1851. See 77

Ct. Cl. at 362-63.[211] The claimant American Indian Tribe was required to prove by a preponderance of the evidence that it had occupied the land in question by "immemorial possession." 77 Ct. Cl. at 358. Although the Court of Claims was not explicit in the particulars of the evidence that the Tribe submitted, to include whether formal objection controverted such evidence, it stated that the "[p]laintiff . . . introduced the greater number of witnesses giving oral testimony." 77 Ct. Cl. at 366. The Court of Claims, however, refused to credit this evidence, stating that "much of the evidence . . . is from a source that lessens its weight[,]" 77 Ct. Cl. at 366, and emphasizing that the witnesses "were either . . . children at the time of the signing of the treaty or very old men at the time when they gave their testimony, and on account of age having at best a very incomplete recollection of matters that occurred fifty years prior thereto," 77 Ct. Cl. at 369. The Court of Claims concluded that "[t]he circumstances of the case make this testimony so unsatisfactory as to be unworthy of any credit." 77 Ct. Cl. at 369. In place of the oral tradition evidence, the Court of Claims favored the testimony of "Government agents," 77 Ct. Cl. at 369, asserting that the agents were less biased and had lived with the Tribe for a considerable period of time, thereby adding to their credibility, see 77 Ct. Cl. at 367. The agents alleged that the Tribe had migrated often during their history and that they had never excluded other Tribes from the land in question. See 77 Ct. Cl. at 360. The Court of Claims concluded that the Tribe did not occupy the land for the requisite period of time and thus denied its occupancy claim. See 77 Ct. Cl. at 368.

[211]The Fort Laramie Treaty of 1851 afforded protections and land to "the Sioux or Dahcotahs, Cheyennes, Arrapahoes, Crows, Assiniboines, Gros-Ventre Mandans, and Arrickaras." Treaty of Fort Laramie, Sept. 17, 1851, 11 Stat. 749.

350. In Coos Bay Indian Tribe v. United States, the Coos Bay Indian Tribe resided on a reservation over which they did not have treaty rights. See 87 Ct. Cl. at 148. In 1855, the Superintendent of Indian Affairs in Oregon, authorized by an act of Congress, negotiated a treaty with the Tribe for the possession of the Tribe's land. See 87 Ct. Cl. at 150. The treaty was never ratified, and the Tribe therefore sought to prove its occupation of the land through oral tradition evidence. See 87 Ct. Cl. at 152.[212] Similar to its decision in Assiniboine Indian Tribe v. United States, the Court of Claims in Coos Bay Indian Tribe v. United States did not describe the oral tradition evidence in its opinion, to include whether the evidence was controverted or introduced absent objection. See 87 Ct. Cl. at 150-53. Instead, the Court of Claims stated that "[i]f this testimony is to prevail in every way over documentary and historical evidence it is sufficient to observe that it does prove by hearsay that plaintiffs did occupy the lands claimed from time immemorial[,]" thereby suggesting that the Court of Claims may not have applied the rule against hearsay to oral tradition evidence as it did to most oral evidence. 87 Ct. Cl. at 152. Nevertheless, the Court of Claims concluded that the oral testimony was insufficient on its own to carry the Tribal claimants' burden of proof. See 87 Ct. Cl. at 152-53. The Court of Claims emphasized that "at least seventeen of the twenty-one witnesses produced ha[d] a direct interest in the outcome of the case"; thus, according to the Court of Claims, the oral tradition evidence could not overcome the written evidence that the United States presented. 87 Ct. Cl. at 152.

b. United States Court of Appeals Cases.

[212]Notably, the Court of Claims did not specify the length of time required to prove occupation. See Coos Bay Indian Tribe v. United States, 87 Ct. Cl. at 153.

351. In Sokaogon Chippewa Community v. Exxon Corp., the United States Court of Appeals for the Seventh Circuit refused to admit oral tradition evidence because of concerns over oral tradition reliability. See 2 F.3d at 222. In Sokaogon Chippewa Community v. Exxon Corp., the Sokaogon Indians sought a declaration that the Tribe had the right to occupy a particular tract of land rich in mineral deposits. See 2 F.3d at 220. The issue before the Seventh Circuit was whether the Sokaogon had ceded its aboriginal right after negotiating a treaty during the 1800s. See 2 F.3d at 221. The Tribe primarily used oral tradition evidence to detail the United States' promise to include the land in question in a reservation for a discrete group of Chippewa Indian band, the Post Lake band. See 2 F.3d at 222. The Honorable Richard A. Posner, former Circuit Judge for the United States Court of Appeals for the Seventh Circuit, stated that "there is no documentation of this tradition, which is at best embroidered (too many ransoms, shipwrecks, lost and stolen maps, and deathbed revelations to be plausible) and at worst fictitious." 2 F.3d at 222. Moreover, Judge Posner continues, "[n]o government document so much as hints at any such promise . . . and several government documents state that the Post Lake bands are not entitled to their own reservation." 2 F.3d at 222. Judge Posner thus held that the Sokaogon had failed to state a claim sufficient to survive summary judgment. See 2 F.3d at 224. Judge Posner concluded that the oral tradition evidence was not admissible, because "no effort was made by the Sokaogon's counsel to cast it into a form in which it would be admissible in a court of law." 2 F.3d at 224-25.

352. In Bonnichsen v. United States, the United States Court of Appeals for the Ninth Circuit examined the use of oral tradition evidence within NAGPRA's context. See 367 F.3d at 881-82. The claim in Bonnichsen v. United States involved approximately 9,000-year-old human remains that were found in the State of Washington. See 367 F.3d at 868. Because of the remains'

extreme age, archaeologists and other scientists desired to study the body. See 367 F.3d at 868. A coalition of Indian Tribes, however, sought to have the remains, known popularly as the "Kennewick Man," repatriated under NAGPRA. 367 F.3d at 869-70. A Department of the Interior final decision awarded the remains to the American Indians, and, in Bonnichsen v. United States, a group of scientists sought judicial review of that decision. See 367 F.3d at 875. In ruling for the scientists on appeal, the Ninth Circuit stated that,

> because the value of [oral tradition] accounts is limited by concerns of authenticity, reliability, and accuracy, and because the record as a whole does not show where historical fact ends and mythic tale begins, we do not think that the oral traditions . . . were adequate to show the required significant relationship of the Kennewick Man's remains to the Tribal Claimants. . . . 8340 to 9200 years between the life of Kennewick Man and the present is too long a time to bridge merely with evidence of oral traditions.

367 F.3d at 875.[213] Hence, Bonnichsen v. United States indicates that, although NAGPRA allows courts to admit oral tradition evidence, it remains unclear whether courts will give weight to oral tradition evidence without corroboration by other evidence.

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[213]Legal academics and practitioners have criticized the Ninth Circuit's decision in Bonnichsen v. United States for its alleged bias against American Indian oral tradition evidence testimony. One commentator, for example, calls the Ninth Circuit's decision in the case "the most lethal attack on Native American identity in recent American jurisprudence." Ashley Young, Continuing an American Legacy of Racial and Cultural Injustice: A Critical Look at Bonnichsen v. United States, 17 DePaul J. Art, Tech. & Intell. Prop. L. 1, 31 (2006). Criticism alleges that the Ninth Circuit elevated western scientific methods over American Indian cultural traditions. See Allison M. Dussias, Kennewick Man, Kinship and the "Dying Race": The Ninth Circuit's Assimilationist Assault on the Native American Graves Protection and Repatriation Act, 84 Neb. L. Rev. 55, 1160 (2005); S. Alan Ray, Native American Identity and the Challenge of Kennewick Man, 79 Temp. L. Rev. 89, 110 (2006); Young, supra, at 35 ("[T]he court's analysis clearly reinforced the long-standing norm of the dominant society that science trumps culture."). The Ninth Circuit in Bonnichsen v. United States rejected the Secretary of Interior's reliance on oral tradition evidence, and noted that gaps in the empirical record precluded the Secretary's cultural affiliation finding between Kennewick Man and modern Tribes. See Bonnichsen v. United States, 367 F.3d at 880-82. Critics argue that the Ninth Circuit made this ruling even though the

regulations implementing the NAGPRA specifically note that a finding of cultural affiliation is based on an "evaluation of the totality of the circumstances." Taylor S. Fielding, supra, 2 Am. Ind. L. J. at 305 (citing 43 C.F.R. § 10.14(3)(d)). According to Taylor Fielding, Tribal Prosecutor for the sovereign Kootenai Tribe of Idaho, those regulations dictate that a cultural affiliation finding "should not be precluded solely because of some gaps in the record" and that, thus, the Secretary validly relied on oral traditional evidence. Fielding, supra, at 305.

Allison Dussias, Professor of Law at New England Law Boston, noted that, in Bonnichsen v. United States, American Indian "understandings of kinship, ancestry, and history were treated as uncivilized and unscientific, and therefore not entitled to respect from the dominant society and its judicial system." Dussias, supra, at 110. Congress anticipated that courts may be more inclined to accept scientific evidence over other forms of evidence, Professor Dussias argues, because, in prescribing a preponderance of the evidence standard, the NAGPRA's implementing regulations state that "[c]laimants do not have to establish cultural affiliation with scientific certainty." Dussias, supra, at 110 (citing 43 C.F.R. § 10.14(3)(f)). Mr. Fielding argues that the Ninth Circuit's rejection of American Indian oral tradition evidence in favor of scientific evidence thus conflicts with Congress' express directives to permit such evidence. See Fielding, supra, at 306.

Dr. Alan Ray, President of Fisher College, writes that the problem with the Ninth Circuit's opinion in Bonnichsen v. United States is the Ninth Circuit's lack of a "conceptual scheme . . . to understand and take seriously the testimony of present-day members of tribal claimants." Ray, supra, at 141. Hence, Ray argues, the Ninth Circuit dismissed oral traditional evidence as unpersuasive, because this evidence failed to provide facts similar to modern historical studies. See Ray, supra, at 138-39. Professor Dussias asserts that the Ninth Circuit disregarded Congress' intent for NAGPRA and that, rather than discounting oral tradition evidence testimony, Congress viewed oral tradition as one of the "relevant types of evidence to be considered without indicating that it was to be given lesser weight than other forms of evidence." Dussias, supra, at 146 (citing 43 C.F.R. § 10.14(e)). See Young, supra, at 11 (suggesting that Congress' failure to prioritize evidence considered under NAGPRA indicates that courts must weigh oral tradition evidence equal to evidence admitted pursuant to conventional standards).

Moreover, the Ninth Circuit's decision in Bonnichsen v. United States is seen as contrary to prior federal court decisions to accept oral traditional evidence, to include Ninth Circuit decisions. See Fielding, supra, 306 (citing Brief for Haudenosaunee Standing Committee on Burial Rules and Regulations as Amicus Curiae Supporting Appellant-Intervenors, Bonnichsen v. United States, 367 F.3d 864 (9th Cir. 2003)(Nos. 02-35994 and 02-35996)(noting testimony by tribal elders has been sanctioned for over 20 years). See also Cree v. Flores, 157 F.3d 762, 773-74 (9th Cir. 1998)(holding that the oral tradition evidence testimony of Tribal members educated in Tribal history and customs is reasonable and credible factual data regarding relevant aspects of Indian life). Congress made oral tradition evidence admissible for a narrow purpose -- American Indian human remains repatriation. Congress did not, however, dictate the weight to be given to that oral tradition. Congress also did not dictate a result. The Court is not in a position to criticize the Ninth Circuit's understanding of the evidence without taking on a review of the entire record before the Ninth Circuit, a task beyond this opinion's scope. What remains clear to the Court, however, is that, for NAGPRA claims, the courts must admit oral tradition evidence, and also that

2. Admitted, Credited Oral Tradition Evidence.

353. In at least three cases brought before the ICC, and a fourth arising by special jurisdictional act of Congress, the Court of Claims, and its successor court, the United States Claims Court, explicitly recognized and assigned evidentiary weight to oral tradition evidence. See Wally v. United States, 148 Ct. Cl. at 373-74; Confederated Tribes of the Warm Springs Reservation of Or. v. United States, 177 Ct. Cl. at 184; Pueblo de Zia v. United States, 165 Ct. Cl. at 505; Zuni Tribe of N.M. v. United States, 12 Cl. Ct. at 616 n.12.

354. In Pueblo de Zia, the Tribal claimants appealed from an ICC decision which held that oral tradition evidence from various Tribal council members was insufficient to prove aboriginal title to land that the United States had taken. See Pueblo de Zia, 165 Ct. Cl. at 503-04. The testimony consisted of "oral accounts handed down from father to son . . . from time immemorial." 165 Ct. Cl. at 504. The United States' brief stated that the evidence was "literally worthless." 165 Ct. Cl. at 505. The Court of Claims, in contrast, emphasized that, because the United States did not proffer any evidence of its own, and because the oral tradition evidence was corroborated, the oral tradition evidence was therefore "entitled to *some* weight; it cannot be ignored or discarded." 165 Ct. Cl. at 505 (emphasis in original). As support for this conclusion, the Court of Claims cited Rapid Transit Co. v. United States, 295 F. 2d 465, 466-67 (10th Cir. 1961), wherein the Tenth Circuit adopted the rule that the Supreme Court of Kansas enunciated in Gibbs v. Central Surety and Insurance Corporation, 181 P.2d 498, 499 (Kan. 1947), as follows:

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courts should not disregard the Congressional mandate to consider such evidence pursuant to NAGPRA. As with any other testimony, the Court cannot prejudge the ultimate result.

> [W]here plaintiff produces two witnesses who testify on every material element of plaintiff's cause of action, and such testimony is not inherently improbable or uncandid, and the cross-examination does not develop any conflict, and the defendant produces no testimony in opposition, the trier of fact is not justified in arbitrary or capriciously disregarding such testimony.

Gibbs v. Cent. Sur. and Ins. Corp., 181 P.2d at 499 (quoted by the Tenth Circuit in Rapid Transit Co. v. United States, 295 F.2d at 466-67). Nevertheless, the Court of Claims qualified the use of the oral traditional evidence by suggesting that "corroboration of historical and archaeological evidence and testimony" may be necessary. 165 Ct. Cl. at 504.

355. In Confederated Tribes of the Warm Springs Reservation of Oregon v. United States, the Tribal claimants sought to prove aboriginal title to land ceded to the United States under the Treaty of June 25, 1855, 12 Stat. 963. See Confederated Tribes of the Warm Springs Reservation of Or. v. United States, 177 Ct. Cl. at 184. Although the Court of Claims followed the reasoning in Pueblo de Zia v. United States, by stating that oral tradition evidence "is entitled to some weight, and is not to be deemed worthless, particularly when it is corroborated by documents and the testimony of others," the Court of Claims added that "[t]he importance of corroboration and cross-checking cannot be undervalued since informants can mislead researchers by describing some period (usually the reservation one) besides the aboriginal, pre-treaty period." Confederated Tribes of the Warm Springs Reservation of Or. v. United States, 177 Ct. Cl. at 204. Thus, although Pueblo de Zia v. United States and Confederated Tribes of the Warm Springs Reservation of Or. v. United States established that Tribal claimants could use oral traditional evidence in the Court of Claims, the requirement of corroboration by outside sources severely limits such use.

356. In Wally v. United States, the Court of Claims allowed testimony as to reputation about facts that Tribal witnesses did not know personally to show the extent of American Indian land boundaries:

> Community reputation about facts which are no longer available to individuals or susceptible of other proof has long been admissible to show the location of ancient boundaries. . . . The reason for this rule is not only caused by the perishable nature of boundary markers, but also because general reputation about facts of community interests are generally trustworthy. It is unlikely that a falsehood could become generally accepted in a community as the truth. The prolonged and constant exposure of these facts to observation and discussion by the community sifts out the possible errors and gives to the residual facts which are generally accepted by the locality a trustworthiness which allows these facts to be presented as evidence in a court of law.

148 Ct. Cl. at 373-74. The ICC thus permitted uncontroverted oral tradition evidence as testimony to prove the reputation of facts about past events that are known by the community as a whole, but are no longer available to individuals. See 148 Ct. Cl. at 373-74.

357. In Zuni Tribe of New Mexico v. United States, Tribal claimants sought compensation for the United States' alleged taking of tribal lands. See 12 Cl. Ct. at 607. The Claims Court admitted large amounts of oral tradition evidence,[214] and the Tribal claimants

[214]Dr. Andrew Wiget, Professor of English at New Mexico State University and the anthropologist who worked with the Zuni during this case, suggests that the Claims Court was inclined to accept significant oral tradition evidence, in part, because of the elaborate process he used to gather and organize the Zuni's oral histories. See Andrew Wiget, Recovering the Remembered Past: Folklore and Oral History in the Zuni Trust Lands Damages Case, in Zuni and the Court: A Struggle for Sovereign Land Rights 173, 173-74 (E. Richard Hart ed., 1995). Professor Wiget presented the oral histories to the Claims Court through 1,300 deposition pages. See Wiget, supra, at 173-74. This strategy likely had a greater impact than simply allowing witnesses to give unstructured monologues from the stand, because Professor Wiget presented the evidence in a format with which United States courts are familiar. See Glen Stohr, Comment, The Repercussions of Orality in Federal Indian Law, 31 Ariz. St. L. J. 679, 693-94 (1999).

Furthermore, Professor Wiget created a method to demonstrate to courts the "integrity" of oral tradition evidence. Wiget, supra, at 177. He used three criteria: validity, reliability, and

ultimately succeeded in proving their claim to the lands in question. See 12 Cl. Ct. at 641. Notably, the Claims Court accepted the oral tradition evidence against the United States' protestations:

> Defendant conjectures, but offers no evidence to contradict or impeach the Zuni recounting of their history. And, given the import attached to the oral transmission of history and religious observation by the Zuni, there is no reason to suspect gross or deliberate distortion. Accordingly, the court is persuaded that, notwithstanding some insufficiency, this recounted history is of evidentiary probity.

12 Cl. Ct. at 616 n.12. Nevertheless, the Claims Court did not describe the oral tradition evidence, provide any binding authority for other courts to follow, or explain why it was persuaded that the histories were "of evidentiary probity." 12 Cl. Ct. at 616 n.12.

LAW REGARDING ABORIGINAL TITLE

358. Aboriginal title, or original Indian title, refers to American Indian land occupancy rights premised on exclusive use and occupancy of a particular territory at the time of first European contact, and to an entitlement arising subsequent to such contact under the governing European sovereign's laws, which are derived largely from international law concepts that

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consistency. See Wiget, supra, at 177. According to Professor Wiget, "[v]alidity" depends on the relationship between the oral tradition and other documents and evidence; "reliability" depends on the ability of one individual to "tell the same story about the same events on different occasions"; and "consistency" depends on "the degree to which the form or content of one testimony conforms with other testimonies." Wiget, supra, at 177-79.

After acquiring the oral history depositions, Professor Wiget studied both the Zuni's repeated answers to his questions regarding land conditions relevant to the claim and the answers that disagreed with the majority of deponents. See Wiget, supra, at 176-81. Through this process, Wiget determined what most likely occurred based on what the depositions alone provided. Wiget, supra, at 176-81. Only after recording the depositions did Professor Wiget examine other evidence that supported the conclusions he derived from his informants' statements. See Wiget, supra, at 185. Hence, the Claims Court ultimately found Professor Wiget's representations credible, because the oral histories supported and added detail to the available archaeological evidence. See Wiget, supra, at 185.

prevailed before the American Revolution. See Pueblo of Jemez v. United States, 790 F.3d at 1151-56 (discussing Indian law and aboriginal title history); Felix Cohen, Original Indian Title, 32 Minn. L. Rev. 28, 43-44 (1947)("Our concepts of Indian title derive only in part from common law feudal concepts. In the main, they are to be traced to Spanish origins, and particularly to doctrines developed by Francisco de Vitoria, the real founder of modern international law."). A Tribe establishes aboriginal title by "immemorial occupancy . . . to the exclusion of other Indians," i.e., by continually and exclusively fishing, hunting, gathering, and otherwise occupying lands. Northwestern Bands of Shoshone Indians v. United States, 324 U.S. 335, 338-39 (1945). Aboriginal title exists at the United States' pleasure, and the United States may effectuate aboriginal title extinguishment "by treaty, by the sword, by purchase, by the exercise of complete domination adverse to the right of occupancy, or otherwise." Santa Fe, 314 U.S. at 347. Although Congress has the exclusive power to extinguish aboriginal title, intent to do so must be "plain and unambiguous," and will not be "lightly implied." Santa Fe, 314 U.S. at 346, 354. Notwithstanding this requirement, several federal courts have held that Congressional acts in anticipation of settlement and public use, and actual settlement, by non-Indians are factors that may effect extinguishment. See, e.g., United States v. Gemmill, 535 F.2d at 1147; United States v. Pueblo of San Ildefonso, 513 F.2d at 1391; Gila River Pima-Maricopa Indian Cmty. v. United States, 494 F.2d at 1386.

1. Establishment of Aboriginal Title.

359. Among the ways that American Indian Tribes may acquire real property interests is through possession and exercise of sovereignty,[215] and, within the bundle of recognized property rights,[216] aboriginal title refers to land claimed by sovereignty, rather than by letters patent or other formal conveyance.[217] Aboriginal title preexists the formation of the United States. See Santa Fe, 314 U.S. at 347 ("Nor is it true, as respondent urges, that a tribal claim to any particular lands must be based upon a treaty, statute, or other formal government action."); Cramer v. United States, 261 U.S. 219, 229 (1923)("The fact that such right of occupancy finds no recognition in any statute or other formal governmental action is not conclusive."). See also Native Vill. of Eyak v. Blank, 688

[215]The Supreme Court has delineated six ways in which Tribes may acquire interest in real property: (i) possession and exercise of sovereignty; (ii) action of a prior government; (iii) by treaty; (iv) by act of Congress; (v) by executive action; or (vi) by purchase. See Montana v. United States, 450 U.S. 544, 559 (1981).

[216]The common law of real property recognizes particular estates in land that comprise the permissible forms in which real property is held. See Joseph William Singer, Property §§ 7.1-7.7, at 299-344 (5th ed. 2016). These estates describe particular bundles of rights and obligations, some of which owners can vary and some of which owners cannot vary. See Singer, Property §§ 7.1-7.7, at 299-344. In the American legal landscape, the real property interests that American Indian Tribes hold "represent a unique form of property right, one that is shaped by the federal trust over tribal land and statutory restraints against alienation." See Cohen's Handbook, supra note 192, § 5.04[3][a], at 995 (discussing the federal government's interest in tribal land as a trustee's fee title and the tribal interest as beneficial ownership under trust). Approximately "56.2 million acres of land are now held in trust by the United States for Indian Tribes and individuals." Cohen's Handbook, supra note 192, § 15.01, at 995. That amount is about two percent of the landmass of the continental United States. See An Introduction to Indian Nations in the United States, Nat'l Cong. of Am. Indians, 13 (Nov. 11, 2003), http://www.ncai.org/about-tribes/Indians_101.pdf.

[217]Letters patent is defined as a "document granting some right or privilege, issued under governmental seal but open to public inspection." Letters Patent, Black's Law Dictionary 1046 (10th ed. 2014).

F.3d at 622 (9th Cir. 2012)("Aboriginal rights don't depend on a treaty or an act of Congress for their existence."); Sac & Fox Tribe of Indians of Okl. v. United States, 383 F.2d at 998-99 (stating that aboriginal title is not "frozen" as of the date of discovery or the date of establishment of the United States). Aboriginal title is established through exclusive occupation of historic Indian lands. See Santa Fe, 314 U.S. at 345 ("If . . . the lands in question . . . were included in[] the ancestral home of the Walapais in the sense that they constituted definable territory occupied exclusively by the Walapais (as distinguished from lands wandered over by many tribes), then the Walapais had 'Indian title.'" (quoting Buttz v. N. Pac. R.R. Co., 119 U.S. 55, 66 (1886)). See also Native Vill. of Eyak v. Blank, 688 F.3d at 622 ("[T]he Villages have the burden of proving 'actual, exclusive, and continuous use and occupancy 'for a long time' of the claimed area." (quoting Sac & Fox Tribe of Indians of Okl. v. United States, 383 F.2d at 998))). Moreover, "occupancy necessary to establish aboriginal possession is a question of fact." Santa Fe, 314 U.S. at 345.

360. The Supreme Court consistently has held that Tribes have a "legal as well as just claim to retain possession" of the land that they have historically occupied within the United States. Johnson v. M'Intosh, 21 U.S. 543, 574 (1823). Moreover, this right exists independent of the United States' recognition.[218] See Holden v. Joy, 84 U.S. 211, 244 (1872)("[T]he Indians as tribes or nations, have been considered as distinct, independent communities, retaining their original, natural rights as the undisputed possessors of the soil, from time immemorial.").

[218]Both international law and other common-law countries' law recognize aboriginal title. See, e.g., UN Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Sept. 2007); Mabo v. Queensland II (1992) 175 C.L.R. 1 (Austl.)(holding that "native title" exists and that Australia's common law recognizes native title).

361. Early Supreme Court decisions built the framework for understanding the relationship of the United States to Tribes and Tribal property. For example, in Johnson v. M'Intosh, the Marshall Court[219] adopted a rule of international law known as the "discovery doctrine" and explained how that doctrine functions alongside United States law. See 21 U.S. at 572-74. Under the discovery doctrine, European nations claimed the right to acquire land rights from American Indians, exclusive both of other European nations and of their own subjects. See 21 U.S. at 573 ("[D]iscovery gave title to the government by whose subjects, or by whose authority, it was made, against all other European governments, which title might be consummated by possession."). The Supreme Court in Johnson v. M'Intosh held that Tribal conveyances to private parties in 1773 and 1775 did not convey fee simple title to the lands, because English law forbade alienation of aboriginal title without the Crown's consent. See 21 U.S. at 594. Thus, the United States' later conveyances of the fee in those lands superseded the Tribe's prior conveyances. See 21 U.S. at 603-04. The Supreme Court described the Tribal interest in the land as a "title of occupancy," "rights of occupancy," and "right of possession," 21 U.S. at 583, 587, 588, and characterized the United States' interest as successor to the discoverer as the "fee," "absolute title," and the "absolute ultimate title," 21 U.S. at 588.

362. The discovery doctrine prevents aboriginal title alienation without the European sovereign's consent or the United States' consent, or that of the original thirteen states,[220] as

[219]The "Marshall Court" refers to the Supreme Court of the United States from 1801 to 1835, when John Marshall served as the fourth Chief Justice of the United States. See Bernard Schwartz, A History of the Supreme Court 43-44 (1993).

[220]An earlier Supreme Court decision established that the thirteen original states had succeeded England's fee interest in aboriginal title. See Fletcher v. Peck, 10 U.S. 87, 142-43

successor-in-interest. See Oneida Indian Nation v. Cty. of Oneida, 414 U.S. at 670; Seneca Nation of Indians v. Christy, 162 U.S. 283, 828 (1896). Alongside the restraint on alienation was the exclusive power to purchase Indian land, traditionally called the "right of preemption."[221] Johnson v. M'Intosh, 21 U.S. 571 n.5. The discovery doctrine also provided a mechanism to validate the United States' previous acquisitions of Tribal land "by purchase or conquest." Johnson v. M'Intosh, 21 U.S. at 587.

363. Three additional Marshall Court opinions address aboriginal title and further elaborate on the nature of Tribal rights to property: Cherokee Nation v. Georgia, 30 U.S. 1 (1831); Worcester v. Georgia, 31 U.S. 515 (1832); and Mitchel v. United States, 34 U.S. 711 (1835). In Cherokee Nation v. Georgia, the Supreme Court affirmed that "the Indians are acknowledged to have an unquestionable, and heretofore unquestioned, right to the land they occupy, until that right shall be extinguished by a voluntary cession to our government." 30 U.S. at 32. In Worchester v. Georgia, the Supreme Court discussed extensively the doctrine of discovery and the nature of

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(1810). See also Seneca Nation v. New York, 382 F.3d 245, 265 (2d Cir. 2004)(holding that title to Seneca lands that England acquired in 1764 passed to New York after the American Revolution). This doctrine changed with the adoption of the Constitution of the United States, whereby the United States gained exclusive power over Indian affairs. See Worcester v. Georgia, 31 U.S. at 558. See also Oneida Indian Nation v. New York, 194 F. Supp. 2d 104, 146 (N.D.N.Y. 2002)(Kahn, J.)("Any rights [in Indian land] possessed by the State prior to ratification of the Constitution were ceded by the State to the federal government by the State's ratification of the Constitution."). Congress formally exercised its exclusive power over Tribal lands in the 1790 Nonintercourse Act by forbidding any transfer of title to lands that Indians or Tribes held to any person or state, "whether having the right of pre-emption to such lands or not," unless made by treaty held under federal authority. Act of July 22, 1970, § 4, 1 Stat. 137.

[221]Right of Preemption is defined as a "potential buyer's contractual right to have the first opportunity to buy, at a specified price, if the seller chooses to sell within the contracted period." Right of Preemption, Black's Law Dictionary 1521 (10th ed. 2014).

aboriginal title, and noted that, while the sovereign interest permitted the European sovereign to issue land grants still subject to aboriginal title, the issuance of a grant was insufficient by itself to extinguish such title. See 31 U.S. at 546. Until the European sovereign purchased the land from a given Tribe, the grant "asserted a title against Europeans only and was considered as blank paper so far as the rights of natives were concerned." 31 U.S. at 546. In Mitchel v. United States, the Supreme Court upheld the validity of title acquired from an Indian Tribe in present-day Florida, because Spain had ratified the Tribal sale and thereby extinguished aboriginal title to the property. See 34 U.S. at 751-53. The Supreme Court affirmed the notion that aboriginal title was "as sacred as the fee simple of the whites" and analogized the sovereign's right as an "ultimate reversion in fee" subject to the Tribe's "perpetual right of occupancy." 34 U.S. at 746, 756.

364. Although refusing to accord American Indians full sovereignty and title over their lands, the Marshall Court cases nevertheless afford ample respect to aboriginal title. See, e.g., Johnson v. M'Intosh, 21 U.S. at 574 (stating that aboriginal title makes a Tribe's members "the rightful occupants of the soil, with a legal as well as just claim to retain possession of it"). The Supreme Court respected the Tribal right to retain possession, provided Tribes remained at peace with the United States. See Johnson v. M'Intosh, 21 U.S. at 591 ("[T]he Indian inhabitants are to be considered merely as occupants, to be protected, indeed, while in peace, in the possession of their lands."). These cases further recognize Tribal sovereignty over Tribal lands by asserting that Tribal members and others who acquire land from Tribes are subject to Tribal law. See Johnson v. M'Intosh, 21 U.S. at 593 ("The person who purchases lands from the Indians, within their territory, incorporates himself with them, so far as respects the property purchased; holds their title under their protection, and subject to their laws."). In contrast, only the United States could

extinguish aboriginal title, with purchase being the preferred acquisition method. See Johnson v. M'Intosh, 21 U.S. at 586. While Congress and the President did not always follow these principles, the Supreme Court consistently reiterated and applied them to protect aboriginal title. See, e.g., Cty. of Oneida v. Oneida Indian Nation, 470 U.S. at 235 (collecting cases); Holden v. Joy, 84 U.S. at 244 (stating that aboriginal title is "absolute, subject only to the [federal] pre-emption right of purchase"); Chouteau v. Molony, 57 U.S. 203, 203 (1853)(interpreting Spanish fee grant as confirming easement granted previously to Tribe).

365. A Tribe asserting aboriginal title may bring a federal common-law action to enforce ownership rights. See, e.g., Cty. of Oneida v. Oneida Indian Nation, 470 U.S. at 235-36 (collecting cases). Moreover, the Supreme Court has stated that occupancy necessary to establish aboriginal possession is a question of fact, determined as any other question of fact. See Santa Fe, 314 U.S. at 359-60 ("As we have said, occupancy necessary to establish aboriginal possession is a question of fact."). The Court of Claims has concluded that factual support for an aboriginal title claim may include: evidence that no other Tribes claimed or used the areas involved, a neighboring Tribe's recognition of ownership, earlier official European sovereign recognition of the Tribe's exclusive title, and expert testimony of historians in the field of American history. See Otoe & Missouria Tribe v. United States, 131 F. Supp. 265, 289-91 (Ct. Cl. 1955).

2. Scope and Limits of Aboriginal Title.

366. The requirement that aboriginal title be based on possession or occupancy, as opposed to official documentation, raises important questions about the nature and extent of possession required to support aboriginal title. Since the earliest Spanish conquests, opponents of American Indian property rights have argued that hunting, gathering, and other uses which involve

only occasional human presence are not sufficient to constitute possession. See, e.g., Johnson v. M'Intosh, 21 U.S. 543, 567 ("On the part of the defendants, it was insisted, that the uniform understanding and practice of European nations, and the settled law, as laid down by the tribunals of civilized states, denied the right of the Indians to be considered as independent communities, having a permanent property in the soil."). Opponents of such rights argued that courts should declare Indian lands vacant and available to the first Europeans to put them to commercial use. See Johnson v. M'Intosh, 21 U.S. at 588-89. Alternatively, they argued that hunting rights should be nonexclusive, similar to fishing rights in public lands. See Johnson v. M'Intosh, 21 U.S. at 567-71 (citing as justification the scholarship of notable European authors Locke, Grotius, Montesquieu, and de Vattel[222]). The Marshall Court, however, rejected these arguments in Johnson v. M'Intosh and again in Mitchel v. United States, both of which recognize aboriginal title based on traditional Tribal use alone. See Johnson v. M'Intosh, 21 U.S. at 569-70; Mitchel v. United States, 34 U.S. at 746 (1835)("[T]heir hunting grounds were as much in their actual possession as the cleared fields of the whites.").

367. In treaties with the United States, the limit of aboriginal title correspond with the limit of a Tribe's exclusive possession that other Tribes respected, i.e. with a Tribe's national boundaries; therefore, proof of exclusive and continuous occupation of the land determines the

[222]These scholars all shared a preference for land use patterned after the European labor theory of property, i.e., that interests in real property originate from the exertion of labor upon natural resources. See S. James Anaya, Indigenous Peoples in International Law 11-16 (1996).

boundary of land claimed under aboriginal title.[223] See, e.g., United States v. Alcea Band of Tillamooks, 329 U.S. 40, 40 (1946); Santa Fe, 314 U.S. at 345; Pueblo of Jemez v. United States, 790 F.3d at 1165. See also Yankton Sioux Tribe of Indians v. South Dakota, 796 F.2d 241, 243 (8th Cir. 1986)("In order to establish aboriginal title, an Indian tribe must show that it actually, exclusively, and continuously used the property for an extended period of time."). Thus, to establish the extent of a land claim under aboriginal title, a Tribe must show that it "'used and occupied the land to the *exclusion of other Indian Groups*.'" Pueblo of Jemez v. United States, 790 F.3d at 1165-66 (emphasis in original)(quoting Pueblo of San Ildefonso, 513 F.2d at 1394). See Native Village of Eyak, 688 F.3d at 624 ("Exclusivity is established when a tribe or a group shows that it used and occupied the land to the *exclusion* of other Indian groups." (emphasis in original)). This requirement means that the Tribe must have behaved as an owner of the land by exercising dominion and control. See Santa Fe, 314 U.S. at 345. See also Native Vill. of Eyak v. Blank, 688 F.3d at 623 ("The tribe or group must exercise full dominion and control over the area, such that it 'possesses the right to expel intruders,' . . . as well as the power to do so." (quoting Osage Nation of Indians v. United States, 19 Ind. Cl. Comm. 447, 489 (1968))). The Court of Claims has explained that

> [i]mplicit in the concept of ownership of property is the right to exclude others. Generally speaking, a true owner of land exercises full dominion and control over it; a true owner possesses the right to expel intruders . . . . True ownership of land by a tribe is called in question where the historical record of the region indicates that it was inhabited, controlled or wandered over by many tribes or groups.

[223]Moreover, a Tribe may prove exclusive and continuous occupation by reference to adjacent land that the Tribe ceded. See, e.g., United States v. Elliott, 131 F.2d 720, 724 (10th Cir. 1942).

> Ordinarily, where two or more tribes inhabit an area no tribe will satisfy the requirement of showing such "exclusive" use . . . .

United States v. Pueblo of San Ildefonso, 513 F.2d at 1394 (quoted by the United States Court of Federal Claims[224] in Wichita Indian Tribe v. United States, 696 F.2d 1378, 1385 (Fed. Cir. 1983)).

368. The Court of Federal Claims has noted that "the general rule of exclusive use and occupancy is subject to three exceptions: (1) the joint-and-amicableuse exception; (2) the dominated use exception; and (3) the permissive use exception."[225] Alabama-Coushatta Tribe of Texas v. United States, No. 3-83, 2000 WL 1013532, at *12 (Fed. Cl. June 19, 2000). The joint-and-amicable use exception provides that "two or more tribes or groups might inhabit an area in 'joint and amicable' possession without erasing the 'exclusive' nature of their use and occupancy," and without interrupting establishment of aboriginal title. Strong v. United States, 518 F.2d at 561

[224]"[I]n the Federal Courts Improvement Act of 1982, Congress established the United States Claims Court to replace the old Court of Claims, pursuant to its Article I powers. . . . Claims Court judges, unlike the life-tenured Article III judges who sit in district courts, serve for limited terms of 15 years." Bowen v. Massachusetts, 487 U.S. 879, 908 n.46 (1988)(citing 28 U.S.C. §§ 171-172). In 1992, the United States Claims Court's name was changed to the United States Court of Federal Claims. See U.S. Court of Federal Claims: The People's Court, The Federal Lawyer, Oct. 2007, at 29. Court of Federal Claims appeals "are taken to the United States Court of Appeals for the Federal Circuit and a judgement there is conclusive unless reviewed by the Supreme Court on writ of certiorari. Decisions of the Court of Claims are binding precedent on both its appellate and trial court successors." U.S. Court of Federal Claims: The People's Court, supra, at 29.

[225]The Court of Appeals, Court of Claims, Claims Court, and Court of Federal Claims cases that discuss the joint-and-amicable use exception, the dominated use exception, and the permissive use exception to the exclusive-use-and-occupancy rule are not binding precedent; however, the Court concludes that these cases have persuasive value with respect to joint aboriginal title claims and, thus, will assist the Court in its disposition of the case. Moreover, the Court notes that the Tenth Circuit in this case cites favorably to numerous out-of-circuit and lower court cases, several of which discuss exceptions to the exclusive-use-and-occupancy rule, including Native Vill. of Eyak v. Blank, 688 F.3d 619, 622 (9th Cir. 2012; Wichita Indian Tribe v. United States, 696 F.2d 1378, 1385 (Fed.Cir. 1983); United States v. Pueblo of San Ildefonso, 513 F.2d 1383; Sac & Fox Tribe of Indians of Okla. v. United States, 383 F.2d 991, 998 (Ct. Cl. 1967).

(quoting United States v. Pueblo of San Ildefonso, 513 F.2d at 1394). "To qualify for treatment under 'joint and amicable' occupancy, the relationship of the Indian groups must be extremely close." Strong v. United States, 518 F.2d at 561. The Court of Claims described such a relationship in Sac & Fox Tribe v. United States:

> Originally the Sac and Fox Nation consisted of two separate and identifiable tribes of Indians belonging to the Algonquin stock. Around 1735, due to their mutual hostility and conflict with the French, they formed a close and intimate alliance, politically and socially, so that from thence forward they have been dealt with and referred to as a single nation both in their relationship with other Indian tribes and in treaty negotiations and other matters with the United States.

315 F.2d at 995. Although the joint possessors must show their relationship is a "close and intimate alliance, politically and socially," Strong v. United States, 518 F.2d at 562, it is not necessary for the Tribes to show that they are completely merged, see United States v. Pueblo of San Ildefonso, 513 F.2d at 1395 ("There are no holdings of this court which say that two Indian tribes or groups, each a separate 'entity' and each with its own separate lands, can never assert joint ownership to other lands which are commonly used and occupied."). For example, the evidence in United States v. Pueblo of San Ildefonso shows that two Indian groups objectively believed that they shared common ownership of the land "in joint tenancy under a 1770 land grant from the Spanish Crown," and the court held that the Tribes used and occupied the land in joint-and-amicable possession. See United States v. Pueblo of San Ildefonso, 513 F.2d at 1395-96. The joint-and-amicable use exception does not apply, however, when "each tribe had separate lands, [and] there was no community of interest in the lands," because

> [t]he [Tribes] did not consider themselves, and were not treated, as a single or closely integrated entity, but rather as separate political groups which were friends or allies (for the most part). Their use of the same lands may have been in common, like much of Indian use of the midwestern and western regions -- but the

> Commission could properly decide that it was not proved to be truly joint, and therefore that each separate tribe's claim to Indian title would have to be tested on its own distinct basis.

Strong v. United States, 518 F.2d at 562. Thus, mere cooperation among two or more Tribes is insufficient to prove joint-and-amicable possession. See Strong v. United States, 518 F.2d at 562.

369. The dominant-use exception to the exclusive use rule recognizes that, where another Tribe commonly uses the land with the claimant Tribe, proof of the claimant Tribe's dominance over the other Tribe preserves its exclusive use of the land. See United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383-86. The claimant Tribe's dominance illustrates its ability to exclude other Tribes from the area, even if it never chooses to exercise that ability. See United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383. In United States v. Seminole Indians of Florida, for example, the Court of Claims explained that the Seminole Indians obtained aboriginal title to the Florida peninsula, notwithstanding the presence of other Indian tribes, because there was

> little question that, in their occupation of the land, the Seminoles held a virtual "monopoly." While expert witnesses concede the contemporaneous existence of other Indians in Florida . . . these scattered groupings were few and far between, and the record offers no evidence to suggest that Seminole dominion was ever challenged by these vestiges of aboriginal cultures. Instead, the pattern that prevailed was one of cultural assimilation -- the Seminoles simply absorbing these "foreign" elements into their own ranks.

United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383. Thus, the dominant-use exception prevails in situations where one Tribe culturally assimilates another Tribe or otherwise exercises complete dominion over "scattered groupings" of other Indians that appear "few and far between." United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383.

370. The permissive-use exception to the exclusive use rule acknowledges that other Indian Tribes could have "rang[ed] over large portions" of the claimant Tribe's land without defeating the exclusive nature of the claimant Tribe's use, as long as the other Tribes' presence was with the claimant Tribe's permission. Wichita Indian Tribe v. United States, 696 F.2d at 1385. The United States Court of Federal Claims in Wichita Indian Tribe v. United States explained that, in light of the other Tribes' friendly relations and trading activities, it required more specific evidence than that of shared hunting grounds to "justify a finding of a lack of exclusive use of all the Texas lands." 696 F.2d at 1385. Similarly, in Spokane Tribe of Indians v. United States, the Court of Claims admonished the ICC to "adequately consider whether [the] use by other Indians was by permission and at the sufferance of the [claimant Tribe], or as a matter of right; if the former, the alien visits would not diminish the appellant's Indian title." Spokane Tribe of Indians v. United States, 163 Ct. Cl. at 68-69. In Strong v. United States, the Court of Claims affirmed the ICC's finding that the claimant Tribe's presence was "overwhelmingly predominant and lasted a long time. Those incidents of use and occupancy by other Indians [the Court of Claims views] as permissive or as so sporadic as not to be inconsistent with [the claimant tribe's] use and occupancy." Strong v. United States, 518 F.2d at 565. To satisfy the permissive use exception, permission need not be explicit, but may be inferred from the record as a whole. See Strong v. United States, 518 F.2d at 572. The Court of Claims in Strong v. United States found that a Tribe other than the claimant Tribe had two settlements in the claim area and inferred permissive use, stating that

> [t]here is evidence that the Wyandot had given permission to other Indian tribes to use their lands in Ohio, and we think the record, taken as a whole, supports the inference that the Ottawa were in the Sandusky area with the consent of the

> Wyandot. Permissive use by the Ottawa did not diminish the title of the Wyandot, and by the same token, such use gave the Ottawa no interest in the land.

Strong v. United States, 518 F.2d at 572.

371. The Court of Federal Claims has noted that "a claimant tribe's non-exclusive use of one segment of the claim area is not automatically imputed to the whole claim area." Alabama-Coushatta Tribe of Texas v. United States, 2000 WL 1013532, at *14. See Wichita Indian Tribe v. United States, 696 F.2d at 1385 (finding that the "sphere of Osage influence capable of disrupting the Wichitas' exclusivity of use . . . did not extend to the southern border of Oklahoma."). Thus, a court may find that a claimant Tribe had exclusive use of certain portions of the claim area, but failed to prove exclusive use of other portions. See e.g., Sac & Fox Tribe of Indians of Okl. v. United States, 315 F.2d at 901-06; Strong v. United States, 518 F.2d at 565-69.

372. When disputes require the Supreme Court to determine the extent of Tribal lands, the Supreme Court applies the canons of construction applicable to treaties with Indian nations and to statutes regulating Indian affairs.[226] See, e.g., Choctaw Nation of Indians v. United States,

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[226]The Supreme Court has developed canons of construction to assist lower courts in interpreting Indian treaties; for example, in Choctaw Nation of Indians v. United States, 318 U.S. 423 (1943), the Supreme Court states:

> Of course, treaties are construed more liberally than private agreements, and to ascertain their meaning we may look beyond the written words to the history of the treaty, the negotiations, and the practical construction adopted by the parties. Especially is this true in interpreting treaties and agreements with the Indians; they are to be construed, so far as possible, in the sense in which the Indians understood them, and in a spirit which generously recognizes the full obligation of this nation to protect the interests of a dependent people.

Choctaw Nation of Indians v. United States, 318 U.S. at 431-32 (internal quotation marks and citations omitted). See Cty. of Oneida v. Oneida Indian Nation, 470 U.S. at 247 ("The canons of construction applicable in Indian law are rooted in the unique trust relationship between the United

318 U.S. 423, 431-32 (1943). The Supreme Court and the federal Courts of Appeals have also resolved Tribal boundary disputes by applying general rules for resolution of ambiguities of deeds and patents. See, e.g., Meigs v. M'Clung's Lessee, 13 U.S. 11, 17-18 (1815)(holding that unilateral action of United States' agents cannot give meaning to bilateral treaty); City of New Town v. United States, 454 F.2d 121, 125 (8th Cir. 1972)(holding that administrative action may not alter an Indian reservation's boundaries). Although the Secretary of the Interior has no inherent authority to resolve Tribal boundary disputes, courts have given significant weight to administrative recognition of Tribal boundaries. See, e.g., DeCoteau v. Dist. Cty. Court, 420 U.S. 425, 442-44 (1975)(citing DOI opinion as support for determination of reservation borders). Cf. Op. Sol. Interior, M-36539 (Nov. 19, 1958)("In determining the boundaries of an Indian reservation[,] the recognition by the Interior Department of a boundary as such for many years will be deemed controlling."); Op. Sol. Interior, 57 Interior Dec. 219 (1940)(granting authority to enter into agreement fixing boundaries of allotted and ceded Tribal lands). Errors in United States' land

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States and the Indians. Thus, it is well established that treaties should be construed liberally in favor of the Indians, with ambiguous provisions interpreted to their benefit." (internal quotations and citations omitted)). The Supreme Court affirmed these canons in Minnesota v. Mille Lacs Band of Chippewa Indians, 526 U.S. 172, 119 (1999), wherein the Supreme Court held that, when construing Indian treaties, a court should

> look beyond the written words to the larger context that frames the Treaty, including the history of the treaty, the negotiations, and the practical construction adopted by the parties. In this case, an examination of the historical record provides insight into how the parties to the Treaty understood the terms of the agreement. This insight is especially helpful to the extent that it sheds light on how the [Tribal] signatories to the Treaty understood the agreement because we interpret Indian treaties to give effect to the terms as the Indians themselves would have understood them.

526 U.S. at 196 (internal quotation marks and citations omitted).

surveys, however, are a recurring source of Tribal land claims.[227] See, e.g., Or. Dep't of Fish & Wildlife v. Klamath Tribe, 473 U.S. 753, 756-57 (1985); Creek Nation v. United States, 302 U.S. 620 (1938); Pueblo of Sandia v. Babbitt, 231 F.3d 878 (D.C. Cir. 2000); Seminole Nation v. United States, 102 Ct. Cl. 565, 618-21 (1944); Pueblo of Taos v. Andrus, 475 F. Supp. 359 (D.D.C. 1979)(Gasch, J.).

3. Extinguishment of Aboriginal Title.

373. The basic rule governing alienation of American Indian land is that only the United States can extinguish aboriginal title.[228] See 25 U.S.C. § 177. See also 25 C.F.R. § 152.22(b); Santa Fe, 314 at 347. The United States holds most Tribal property in trust.[229] See Cohen's

[227]At least one Tribe has benefitted from a surveying error. See Yankton Sioux Tribe v. Gaffey, 14 F. Supp. 2d 1135, 1146 (D.S.D. 1998)(Piersol, J.)(discussing treaty that set aside 400,000 acres of reservation land, but "when the reservation was surveyed, it actually contained 430,495 acres").

[228]Consequently, a seller or buyer of Tribal land must show authority in federal law to allow a transfer of the interest from the Tribe, while at common law restraints on alienation of fee interests are upheld only in limited circumstances. See Restatement (Second) of Property § 4.1 cmt. a. (Am. Law. Inst. 1977)(discussing the common-law presumption of alienability). The restraint evolved from the national and international law of the European nations that colonized the Americas. See Johnson v. M'Intosh, 21 U.S. at 592-94. As detailed above, the discovering European sovereign, or its successor by war or purchase, asserted the exclusive right to acquire Indian land. See Johnson v. M'Intosh, 21 U.S. at 592-94. The transfer of the United States' fee interest to a private purchaser became a fee simple interest whenever Congress extinguished the aboriginal title, regardless of the status that title might have had under Tribal law. Had this not been the case, courts would have lacked jurisdiction to settle conclusively the property interests that the Tribe conferred. See Chouteau v. Molony, 57 U.S. at 217-18 (discussing dispute over whether purchase from Tribe was fee or lesser interest); Johnson v. M'Intosh, 21 U.S. at 592-94 (stating that Tribes had allegedly treated purported sale to plaintiffs as revoked).

[229]Over a period of many decades, the formal terminology for aboriginal title changed from the Marshall Court-era's right of occupancy/fee title characterization to the concept of the United States holding Tribal land in trust. See Cohen's Handbook, supra note 192, § 15.09 at 1053. Trust terminology is now explicit in statutes and court decisions, and "more accurately reflects the nature

Handbook, supra note 189, at 997-99. The United States, or the state government in the case of the original thirteen states, holds the "fee" interest -- the right of preemption -- while the Tribe holds the "title of occupancy" or beneficial title. Cohen's Handbook, supra note 189, § 15.03 at 997-99. The Supreme Court has held that, although the sovereign can alienate the right of preemption without Tribal consent,[230] only Congress, or a presidential act ratified by Congress,

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of tribal ownership interests in tribal land, which is limited by the power of the United States to forbid or condition alienation." Cohen's Handbook, supra note 189, § 15.09 at 1053.

[230]The view that the United States could not extinguish aboriginal title without the affected Tribe's voluntary consent permeates the Marshall Court cases, likely because it accords with the spirit of the property law right of preemption, which consists of the right to purchase a property interest in preference to all others when the current holder chooses to sell; for example, in Johnson v. M'Intosh, the Supreme Court noted that the United States has the exclusive power to "acquire" aboriginal tribal title. Johnson v. M'Intosh, 21 U.S. at 603. In Cherokee Nation v. Georgia, the Supreme Court clarified the meaning of "acquire" by noting that "the Indians are acknowledged to have an unquestionable, and heretofore unquestioned, right to the lands they occupy, until that right shall be extinguished by a voluntary cession to our government." 30 U.S. at 17. Furthermore, in Worcester v. Georgia, the Supreme Court stressed that purchase was the preferred method of acquisition of Tribal land, with conquest a legitimate method of acquisition only in the case of Indian Tribes' unjustified war of aggression. See Worcester v. Georgia, 31 U.S. at 546 ("The power of war is given only for defense, not for conquest."); id. at 580 ("The soil, thus taken, was taken by the laws of conquest, and always as an indemnity for the expenses of the war, commenced by the Indians.").

Although before 1887, the United States formally acted only with Tribal consent, coercion and corruption often corrupted that consent. See Cohen's Handbook, supra note 189, § 1.03 at 23-24. After enactment of the General Allotment Act of 1887, consent became yet more attenuated and was at times ignored. See Cohen's Handbook, supra note 189, § 1.04 at 72-75. During those periods, Tribes were rarely able to seek judicial protection of their ownership interests. See Cohen's Handbook, supra note 189, § 1.04 at 72-75. Notwithstanding the de facto policy of non-protection of aboriginal title, the Supreme Court continued to affirm the "voluntary cession" requirement until the 1903 case of Lone Wolf v. Hitchcock, 187 U.S. 553 (1903), wherein the Supreme Court held that Congress had the power to take Tribal property without the Tribe's consent and in violation of treaty promises. See 187 U.S. at 565. The Supreme Court further stated that Congress' decision to take Tribal property is a political question not subject to judicial review. See Lone Wolf v. Hitchcock, 187 U.S. at 565 ("Plenary authority over the tribal relations of the Indians has been exercised by Congress from the beginning, and the power has always been

can extinguish aboriginal title, no matter which sovereign holds the right of preemption. Buttz v. Northern Pac. R.R., 119 U.S. at 65. Thus, the exclusive right to extinguish aboriginal title rests with the United States. See Oneida Indian Nation v. Cty. of Oneida, 414 U.S. at 667 ("Once the United States was organized and the Constitution adopted, these tribal rights to Indian lands became the exclusive province of the federal law. Indian title, recognized to be only a right of occupancy, was extinguishable only by the United States."); Santa Fe, 314 U.S. at 347; Buttz v. Northern Pac. R.R., 119 U.S. at 68; Johnson v. M'Intosh, 21 U.S. at 586.

374. Although the principle that the United States has the exclusive power to extinguish aboriginal title has remained unchanged, the Supreme Court unequivocally has rejected the view that the process by which the United States extinguishes title is nonjusticiable:

> [I]t seems that the Court's conclusive presumption of congressional good faith [in Lone Wolf v. Hitchcock] was based in large measure on the idea that relations between this Nation and the Indian tribes are a political matter, not amenable to judicial review. That view, of course, has long since been discredited in takings cases.

United States v. Sioux Nation, 448 U.S. 371, 413 (1980)(citing Lone Wolf v. Hitchcock, 187 U.S. 553, 565 (1903)).[231] Nevertheless, the Supreme Court continues to state that Congress is authorized to extinguish aboriginal title when it chooses to do so, notwithstanding treaty promises

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deemed a political one, not subject to be controlled by the judicial department of the government.").

[231]International law also rejects the nonjusticibility of aboriginal title extinguishment; for example, The United Nations Declaration on the Rights of Indigenous Peoples provides significant protection for indigenous peoples' right to the lands and resources they have traditionally owned and prevents the taking of such lands without due process and compensation. See, e.g., The United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Sept. 13, 2007), adopted by the General Assembly on September 13, 2007.

to the contrary.[232] See, e.g., Idaho v. United States, 533 U.S. 262, 277 (2001); United States v. Sioux Nation, 448 U.S. at 415 n.29.

375. Moreover, because aboriginal title is based on proof of continuous possession, a number of cases have held Tribal abandonment can result in the loss of aboriginal title, but only if such abandonment is voluntary.[233] See Santa Fe, 314 U.S. at 349; Williams v. City of Chicago, 242 U.S. 434, 438 (1917); Buttz v. Northern Pac. R.R., 119 U.S. at 55. Rather than serving as the basis for title extinguishment, voluntary abandonment most frequently figures in disputes over which of two Tribes owns disputed territory. See Six Nations v. United States, 173 Ct. Cl. 899, 899 (1965). Notably, as discussed above, the Court of Claims repeatedly has held that claims of aboriginal title may survive evidence of joint ownership by two or more tribes. See, e.g., United

[232]Historically, when Tribes sought compensation for their land, they confronted numerous barriers, including the United States' sovereign immunity, the passage of time, and the difficulty of gaining access to the courts. See Cohen's Handbook, supra note 189, § 5.06[2] at 437-38. Aboriginal title has had practical judicial protection only since the 1920s, after federal policy shifted away from the effort to eliminate Tribal land ownership. See Cohen's Handbook, supra note 189, § 1.05 at 79-80. According to present-day Congressional policy, Congress may alienate Indian land by an act of eminent domain, by an arranged purchase of the property, or by other agreement, such as payment of a judgment rendered in a claim for damages. See United States v. Dann, 470 U.S. at 45-50. See also Cohen's Handbook, supra note 189, § 5.06[3] at 430-40 (discussing ICCA's statutorily imposed compensation scheme).

[233]Forcible removal is not voluntary abandonment. See Santa Fe, 314 U.S. at 355-56 ("No forfeiture can be predicated on an unauthorized attempt to effect a forcible settlement on the reservation unless we are to be insensitive to the high standards for fair dealing in light of which laws dealing with Indian rights have long been read."). In two nineteenth-century cases involving Spanish land grants, the Supreme Court notes that the voluntary-abandonment requirement derives from the discovery doctrine. See United States v. Fernandez, 35 U.S. 303, 304 (1832) (relying on Johnson v. M'Intosh, 21 U.S. at 543; United States v. Arredondo, 31 U.S. 691, 747-48 (1832)("[I]f [abandonment was] voluntary, the dominion of the crown over it was unimpaired in its plenitude; if by force the Indians had the right whenever they had the power or inclination to return.").

States v. Pueblo of San Ildefonso, 513 F.2d at 1395; Strong v. United States, 518 F.2d at 561; United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383-86.

376. Although Congress has the power to extinguish aboriginal title, intent to do so must be "plain and unambiguous," and will not be "lightly implied." Santa Fe, 314 U.S. at 346, 354. The Supreme Court consistently holds that Congress' intent to extinguish aboriginal title must be express on the face of the legislative act or treaty authorizing extinguishment, or be clear from the surrounding circumstances. See, e.g., Mattz v. Arnett, 412 U.S. 481, 505, (1973); Santa Fe, 314 U.S. at 353-54; Jones v. Meehan, 175 U.S. 1, 1 (1899). Indeed, most federal land grants explicitly provide that the grantee cannot take possession until aboriginal title is extinguished. See, e.g., Oneida Indian Nation of New York v. New York, 691 F.2d at 1075 ("Until Indian title is extinguished by sovereign act, any holder of the fee title or right of preemption, either through discovery or a grant from or succession to the discovering sovereign, remains subject . . . to the Indian right of occupancy, and the Indians may not be ejected."); Buttz v. Northern Pac. R.R., 119 U.S. at 68 (railroad grant provided for extinguishment of aboriginal title by government "as rapidly as might be consistent with public policy and the welfare of the Indians"). In ambiguous cases regarding the interpretation of statutes and treaties that arguably extinguished aboriginal title, the federal courts have applied the Indian law canon that Tribal property rights are preserved unless Congress's intent to the contrary is clear and unambiguous. See, e.g., Cty. of Oneida v. Oneida Indian Nation, 470 U.S. at 246-47 (interpreting federally approved treaties ceding additional land to New York as not sufficiently clear to extinguish title to land in question); Cramer v. United States, 261 U.S. at 227 (interpreting exception in grant to railroad for lands "otherwise disposed of" to include lands occupied by Indians, in light of federal policy "from the beginning to respect

the Indian right of occupancy"); Pueblo of Jemez v. United States, 790 F.3d at 1164 (rejecting United States' argument that aboriginal title is extinguished if federal land grant does not contain "language that the grant was subject to pre-existing interests," and affirming that "federal land grants pass fee title to the grantees subject to aboriginal title"). See also Cohen's Handbook, supra note 189, § 2.02[1], at 113 ("The basic Indian law canons of construction require that treaties, agreements, statutes, and executive orders be liberally construed in favor of the Indians and that all ambiguities are to be resolved in their favor.").

377. Notwithstanding the requirement that only Congress can extinguish aboriginal title, the Supreme Court has held that payment of a judgment rendered in a claim for damages is sufficient to effect extinguishment. See United States v. Dann, 470 U.S. at 45-50.[234] Moreover,

[234]In United States v. Dann, the government brought a trespass action against two Western Shoshone Indians, Mary and Carrie Dann, for violating the Taylor Grazing Act by grazing their livestock on public land without a permit. See United States v. Dann, 470 U.S. 39, 43 (1985). The United States based its title to the land on an ICC decision, see Western Shoshone Identifiable Group v. United States, 40 Indian Cl. Comm'n 318, 318 (1977), in which the ICC entered judgment in the amount of $26 million for the United States' taking of Western Shoshone Indians' aboriginal title to land located in California, Colorado, Idaho, Nevada, Utah, and Wyoming, see 40 Indian Cl. Comm'n at 318. Although no single act of taking occurred, the ICC found that the United States had treated the property as public land. See Shoshone Tribe v. United States, 11 Indian Cl. Comm'n, 387, 416 (1962)(stating that gradual encroachment by whites, settlers, and others resulted in taking of Indian lands by United States for its own use). In related litigation in Temoak Band of Western Shoshone Indians v. United States, 29 Indian Cl. Comm'n 5 (1972), a Shoshone attorney stipulated that the United States took all the Tribe's Nevada land on July 1, 1872, to simplify the case so that the ICC could assess damages. See Temoak Band of W. Shoshone Indians v. United States, 29 Indian Cl. Comm'n 5, 6 (1972). Those involved in the claims case, including the Tribe's attorney, apparently believed that the claim involved only land which non-Indians held at the stipulation date. See United States v. Dann, 572 F.2d 222, 224 (9th Cir. 1978)(stating that most Western Shoshone Indians still live within land described in the Treaty of Ruby Valley, which defined the boundaries of their land). The Danns, however, were not members of the Temoak Band of Western Shoshones or the entity known as the Western Shoshone Identifiable Group, a group created solely to bring a claim case, and had supported unsuccessful efforts to intervene in the case to exclude claims for present possessory rights. See Western Shoshone Legal Defense &

Educ. Ass'n v. United States, 531 F.2d at 497. One of the original claimants, the Temoak Band, attempted to stay the proceeding in 1977 and thereafter discharged its attorney to stop the claim from proceeding. See Temoak Band of W. Shoshone Indians v. United States, 593 F.2d 994, 997 (Ct. Cl. 1979). Nevertheless, the United States argued that the ICC case barred the Dann sisters' claim to aboriginal title. See United States v. Dann, 572 F.2d at 225 (noting United States' argument that the ICC decision estopped Danns from asserting that Indians retained "beneficial ownership" of Western Shoshone's Nevada lands).

The Ninth Circuit vindicated the sisters' claim by applying general claim preclusion principles. See United States v. Dann, 572 F.2d at 225-26. The Ninth Circuit held that claim preclusion did not attach, because the decision was not final until Congress paid the compensation owed to the Tribe. See United States v. Dann, 572 F.2d at 225-26. The Danns, therefore, were not precluded from litigating the title issue, because the title issue was never raised or litigated before the ICC. See 572 F.2d at 225-26. Instead, the issue litigated was the extent of the Western Shoshone's holdings before "the arrival of the white man." 572 F.2d at 225-26. The Ninth Circuit concluded that "the extinguishment question was not necessarily in issue, it was not actually litigated, and it has not been decided." F.2d at 226-27. The only issue decided, according to the Ninth Circuit, was the extent to which the Western Shoshone asserted title before non-Indian contact. See 572 F.2d at 226. The ICC did not decide that Congress had extinguished their title, and the stipulation established only a date of taking for purposes of valuation. See 572 F.2d at 226.

The Supreme Court reversed the Ninth Circuit by issuing a decision based exclusively on statutory interpretation of the ICCA. See United States v. Dann, 470 U.S. at 44-45. Because the ICCA provides that payment of the claims will fully discharge all of the United States' obligations, the Supreme Court viewed its task as merely to determine whether crediting the judgment award to a Tribal account in the United States Treasury qualified as payment. See 470 U.S. at 44. The Supreme Court applied trust law principles to determine whether payment had been made: payment to a trustee is payment to the beneficiary, so when the United States as defendant handed the money to itself as trustee, payment occurred. See 470 U.S. at 47-50. Although on remand the Danns won the right to retain the land containing their homestead, they lost their grazing land. See United States v. Dann, 873 F.2d 1189, 1200 (9th Cir. 1989)(holding that the Dann sisters' individual land title was restricted to land that they or their descendants occupied before 1934, and restricting animal number and kind that could graze), cert. denied, 493 U.S. 890 (1989).

Scholars have criticized the Supreme Court's decision in United States v. Dann for sidestepping a discussion of the more difficult issues regarding why a decision entered on behalf of a group that was formed just for the purpose of bringing ICC litigation should bind the Dann sisters, whose Band had continuously occupied the land. See Kristine L. Foot, United States v. Dann: What It Portends for Ownership of Millions of Acres in the Western United States, 5 Pub. Land L. Rev. 183, 183 (1984); Nell Jessup Newton, Indian Claims in the Courts of the Conqueror, 41 Am. U. L. Rev. 753, 854 (1992). Then-Professor -- now Dean -- Nell Jessup Newton of Notre Dame Law School, for example, commented that the Supreme Court's opinion is "most notable for what it did not say," specifically that the Supreme Court did not take up the Dann sisters' argument that to permit the United States to use the ICC's judgment against them would result in

several courts have held that Congressional acts in anticipation of settlement and public use, and actual settlement, by non-Indians are factors that may effect aboriginal title extinguishment. See, e.g., United States v. Gemmill, 535 F.2d at 1147; United States v Pueblo of San Ildefonso, 513 F.2d at 1391; Gila River Pima-Maricopa Indian Cmty. v. United States, 494 F.2d at 1386; Plamondon ex rel. Cowlitz Tribe of Indians v. United States, 467 F.2d 935, 937 (Ct. Cl. 1972).

378. In Plamondon ex rel. Cowlitz Tribe of Indians v. United States, the Court of Claims, when tasked with deciding only whether the lands in question were taken in 1855 or 1863, explained first that the limited settlement by non-Indians on the Cowlitz land up to 1855 was not sufficient to extinguish the Tribe's aboriginal title; settlement was minimal and did not disrupt the Cowlitz Tribe's way of life, and, in fact, land patents were not issued to claimants on Cowlitz Tribal lands until several years after 1855. See 467 F.2d at 937-38. By 1863, the Court of Claims found, however, that non-Indians had substantially settled the Cowlitz Tribal land, that the non-Indians greatly outnumbered the Indians, that the Indians intermingled with the non-Indians and no longer maintained an independent existence, and that they were thus deprived of the exclusive

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permitting judicial extinguishment of aboriginal title, i.e., that the judgment would effect a taking of Indian land when only Congress has the authority to confiscate such land. See Newton, supra, at 829-30 (citing Brief for Respondent at 25-29, United States v. Dann, 470 U.S. 39 (1985)(No. 83-1476)). Dean Newton further notes that

> most of the Court's opinion focused on Congress' intent to settle all the ancient claims in enacting the Indian Claims Commission Act. Whether the method chosen might violate fundamental principles of fairness was simply not of interest to the Court. Of greatest concern to the Court was to dispatch these claims cases once and for all.

Newton, supra, at 854 (citing Robert Woodward & Scott Armstrong, The Brethren 57-58, 359 (1979)(stating that Burger Court denigrated Indian claims cases by calling them "teepee" and "peewee" cases)).

use and occupancy of their aboriginal lands. See 467 F.2d at 936-37. This finding, when combined with the establishment of a reservation for the Cowlitz, and evidence of Congressional intent to foreclose treaty negotiations and subject the Cowlitz land to public sale, led the Court of Claims to affirm the ICC's finding of an 1863 taking date. See 467 F.2d at 937.

379. Additional Court of Claims support for aboriginal title extinguishment absent express Congressional intent is seen in Gila River Pima-Maricopa Indian Community v. United States, wherein American Indian claimants -- who had conceded before the ICC that their aboriginal title was extinguished -- argued that, until the enactment of the Taylor Grazing Act of 1934, the settlers' individual entries effected the only extinguishment of aboriginal title to the claimed lands, tract by tract, onto the land in the ICC award area. See 494 F.2d at 1392. In considering the date at which extinguishment occurred, the Court of Claims stated that the ICC was

> faced with a difficult task. Unlike some other cases, there was here no formal cession by the Indians, no express indication by Congress (or its delegate) of a purpose to extinguish at a specified time, and no single act (or contemporaneous series of acts) of the Federal Government which indisputably erased native ownership at one swoop. The Indian appellants say that, in these circumstances, the presumption of the *Santa Fe* opinion requires the tribunal to hold that there was no general taking at all until some unequivocal action by Congress (such as, they concede but only arguendo, the Taylor Grazing Act of 1934). We think, however, that this is a case in which the history of the award area is such that the Commission could permissibly stop short of an uncontroverted and unmistakable sign from Congress.

494 F.2d at 1392. The Court of Claims found that the ICC had the discretion to choose, as the taking date, an Executive Order issued in 1883, which doubled the size of the existing reservation, because the Executive Order indicated that the United States believed that all the rightful Tribal

land was now within the reservations and that the 1883 extension was an effort to keep for the Indians the lands that they were then occupying and using. See 494 F.2d at 1392 ("At that moment, it could be said, the Government called a final halt because in its eyes the Pima-Maricopa group did not own the territory outside of the reservation, and any Indian claim to it was and should be rejected."). Thus, the Court of Claims affirmed the ICC's conclusion that the extent of non-Indian settlement, coupled with an Executive Order that Congress "impliedly ratified," marked the extinguishment of aboriginal title to all of the Tribe's outlying lands. 494 F.2d at 1394 ("In the context of this history, it is proper to imply a Congressional delegation of some of its plenary power over Pima-Maricopa affairs to the executive branch.").

380. The claim for failure to protect aboriginal title in United States v. Pueblo of San Ildefonso arose after the United States created a reservation for thirteen Pueblos on their historic lands, included other Tribal lands in a national forest reserve, and, over many years, granted the Pueblos' remaining lands to non-Indian settlers under the public land laws. See 513 F.2d at 1383. The Court of Claims concluded that the reservation's creation by itself was not sufficient to extinguish Tribal title to lands not included in the reservation borders. See 513 F.2d at 1388. Extinguishment occurred only when federal land laws granted non-Indians the right to settle particular lands. See 513 F.2d at 1391. The United States argued that substantial "non-Indian interference with [the Indians'] exclusive use and occupancy of aboriginal land title areas" extinguished Tribal title. 513 F.2d at 1386-87. The Court of Claims rejected the argument that non-Indian encroachment could result in the loss of aboriginal title when the affected tribe did not voluntarily abandon the land, see 513 F.2d at 1390, and affirmed that private individuals' actions cannot affect aboriginal title, see 513 F.2d at 1387 ("[T]ermination of Indian title is exclusively

the province of the United States."). The Court of Claims held that there must be "clear and convincing evidence of an intent to extinguish" aboriginal title and that "the fact that some entries [by non-Indians] were allowed in the plaintiffs' aboriginal areas is evidence of official negligence, or lack of knowledge of the plaintiffs' areas, rather than an intent on the part of the United States to abolish their whole titles." 513 F.2d at 1390. Nevertheless, the Court of Claims affirmed the ICC extinguishment award based on the dates when the aboriginal areas were included in what later became the Santa Fe National Forest and when individual non-Indian settlers entered Tribal lands under the public land laws, concluding that

> there are no fine spun or precise formulas for determining the end of aboriginal ownership. Unquestionably, the impact of authorized white settlement upon the Indian way of life in aboriginal areas may serve as an important indicator of when aboriginal title was lost. But such authorized settlement is only one of various factors to be considered in determining when specific lands were "taken." *Gila River*, *supra*, 494 F.2d at 1391, 204 Ct. Cl. at 146.

United States v Pueblo of San Ildefonso, 513 F.2d at 1390. See generally Tlingit & Haida Indians v. United States, 177 F. Supp. 452 (Ct. Cl. 1959)(holding that the establishment of forest reserves constituted a taking of land which the claimant Indians historically used and occupied); Pueblo of Nambe v. United States, 16 Ind. Cl. Comm. 393 (1965)(same); Pueblo of Taos, 15 Ind. Cl. Comm. 666 (1965)(same).

381. In United States v. Gemmill -- the only United States Court of Appeals case to consider factors other than express Congressional intent as evidence of aboriginal title extinguishment -- members of the Pit River Indian Tribe were arrested for trespass and theft of United States government property after they removed Christmas trees from the Shasta Trinity National Forest. See 535 F.2d at 1149. Other Tribal members were arrested for trespass when

they sought to stop logging in the Lassen National Forrest, which the members considered sacred Tribal lands. See 535 F.2d at 1147. The members contended that their Tribe possessed unextinguished aboriginal title to the land in question; however, the Ninth Circuit concluded that four events taken together demonstrated Congressional intent sufficient to extinguish their Tribe's aboriginal title. See 535 F.2d at 1149. The first event was passage of the California Land Claims Act of 1851, Act of March 3, 1851, ch. 41, 9 Stat. 631 ("California Land Act"), which required all persons claiming lands by virtue of Spanish or Mexican title grants to present their claims to a special commission or lose their rights. See 535 F.2d at 1148. Although Tribal claims were based on aboriginal possession and occupancy, rather than a grant from Spain or Mexico, the Supreme Court interpreted the statute as requiring the Indians in the area to present their claims to the federal government. See 535 F.2d at 1148 ("In *Barker v. Harvey* . . . and *United States v. Title Ins.* & *Trust Co.* . . . , the Supreme Court upheld fee titles based on· patents against challenges by Mission Indians who had not presented their claims to the 1851 Commission"). Thus, a federal statute interpreted by the Supreme Court constituted sufficient Congressional intent to extinguish aboriginal title when the Tribes in question failed to comply with the statutory claim procedures. See 535 F.2d at 1148.

382. Second, the United States engaged in prolonged military confrontation with the Pit River Indians in the 1850s and 1860s, which culminated in a decisive military defeat in 1867. See 535 F.2d at 1148. The United States then removed the Pit River Indians from their lands by force. See 535 F.2d at 1149. Third, in another express act, the federal government included the lands in question in the Shasta Trinity and Lassen National Forests. See 535 F.2d at 1149 (citing the Court of Claims' holding in United States v. Pueblo of San Ildefonso that the designation of land as a

forest reserve is itself effective to extinguish aboriginal title). Fourth, the Tribe brought a damages claim against the United States before the ICC for taking its lands, and the ICC awarded the Tribe compensation. See 535 F.2d at 1149 (citing Pit River Indians v. United States, 7 Ind. Cl. Comm. 815). In concluding that the Tribe previously had acknowledged the extinction of its aboriginal title, the Ninth Circuit opined:

> The exact date on which Indian title has been extinguished is often difficult to determine. (*See United States v. Pueblo of San Ildefonso*, *supra*, at 1391.) The four events we have recounted amply illustrate that problem. Any one of these actions, examined in isolation, may not provide an unequivocal answer to the question of extinguishment. However, the activity of the federal government, beginning with the ambiguous Act of 1851 and culminating in the payment of the compromise settlement, has included expulsion by force, inconsistent use, and voluntary payment of compensation agreement. (*See Santa Fe*, *supra*, 314 U.S. at 347 . . .) This century-long course of conduct amply demonstrates that the Pit River Indian title has been extinguished.

United States v. Gemmill, 535 F.2d at 1149.[235]

ANALYSIS

383. The Court concludes that no federal rule of procedure nor the doctrine of laches or any statute of limitations bar Jemez Pueblo's aboriginal title claim to the Valles Caldera. Moreover, the Court will not invoke judicial estoppel to preclude the United States' argument that

[235]The United States District Court for the District of Alaska in United States v. Atlantic Richfield Co. cites the United States v. Gemmill decision as an application of the "complete dominion" theory, i.e., that the United States may extinguish aboriginal title "by exercise of complete dominion adverse to the right of occupancy," as the Supreme Court stated in Santa Fe. 435 F. Supp. 1009, 1019 (D. Alaska 1977)(Fitzgerald, J.)(quoting Santa Fe, 314 U.S. at 347; United States v. Gemmill, 535 F.2d at 1149)("The Ninth Circuit recently applied the 'complete dominion' theory in United States v. Gemmill . . . to conclude that a tribe's aboriginal title had been extinguished de jure."). The Court does not agree that the Ninth Circuit in United States v. Gemmill applies the complete dominion theory, and the Court is unaware of any other federal court opinion to make this assertion.

Jemez Pueblo does not possess aboriginal title to the Valles Caldera. The Court further concludes that Jemez Pueblo has not established aboriginal title to the Valles Caldera. Although the evidence proves that Jemez Pueblo has actually and continuously used the Valles Caldera for a long time, the evidence also shows that many Pueblos and Tribes also used the Valles Caldera in ways that defeat Jemez Pueblo's aboriginal title claim.

I. NEITHER SANTA CLARA PUEBLO, NOR ANY OTHER PUEBLO OR TRIBE, IS A NECESSARY AND INDISPENSABLE PARTY TO THIS LITIGATION.

384. "The question of whether an absent party is necessary and/or indispensable is resolved by applying Rule 19 of the Federal Rules of Civil Procedure." Davis v. United States, 192 F.3d 951, 957 (10th Cir. 1999); Rishell v. Jane Phillips Episcopal Mem'l Med. Ctr., 94 F.3d 1407, 1411 (10th Cir. 1996)(indicating that a court must determine whether the party in question is necessary under rule 19(a) before proceeding to decide whether the party is indispensable under rule 19(b)). Rule 19(a) defines those persons who should be joined as parties to an action and thus are considered necessary parties to the action:

> A person who is subject to service of process and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action if (1) in the person's absence complete relief cannot be accorded among those already parties, or (2) the person claims an interest relating to the subject of the action and is so situated that the disposition of the action in the person's absence may (i) as a practical matter impair or impede the person's ability to protect that interest or (ii) leave any of the persons already parties subject to a substantial risk of incurring double, multiple, or otherwise inconsistent obligations by reason of the claimed interest.

Fed. R. Civ. P. 19(a).

385. The Court declines to adopt the United States' argument that, because Jemez Pueblo's Valles Caldera claim threatens the Pueblos of Cochiti, San Ildefonso, Santa Clara, Zia,

and the Jicarilla Apache Nation's many long-standing cultural and religious interests in the Valles Caldera, including their ability to continue to worship on Redondo Peak, these Pueblos are required parties to this litigation. The first consideration under rule 19(a) is whether, in these Pueblos' absence, the Court could afford complete relief to Jemez Pueblo. The Court answers this inquiry in the affirmative, because these Pueblos' absence does not prevent the Court from according "complete relief among existing parties," Fed. R. Civ. P. 19(a)(1)(A), given that Jemez Pueblo has sued the Valles Caldera's present fee holder, the United States, and, that, as the Court has previously noted, the Indian lands exception to the QTA precludes the Court from entering judgment that would affect Santa Clara Pueblo's conservation and access easement, see SJ Order at 7 (citing Block v. North Dakota, 461 U.S. at 275-76 (affirming that, pursuant to the QTA, the United States does not waive sovereign immunity where the land either is held in "trust or [is] restricted Indian lands"). Moreover, Jemez Pueblo has represented to the Court that it "does not make any claim to the land transferred by the Dunigans to Santa Clara Pueblo, or the reciprocal easement transferred by the Dunigans directly to Santa Clara Pueblo," Response at 33, and the Court, therefore, is "not persuaded that there is a likelihood of further lawsuits 'involving essentially the same subject matter,'" Sac & Fox Nation of Missouri v. Norton, 240 F.3d at 1258 (quoting 7 Charles Alan Wright, Arthur R. Miller & Mary Kay Kane, Federal Practice and Procedure § 1604, at 45-46 (2d ed. 1986)("Federal Practice and Procedure")).

386. The second consideration under rule 19(a) is whether the other Pueblos have an interest relating to this action's subject matter, and, if so, whether this action's disposition in the other Pueblos' absence may, as a practical matter, impair their ability to protect that interest, or subject either Jemez Pueblo or the United States to a substantial risk of inconsistent obligations.

Neither Jemez Pueblo nor the United States dispute that other Pueblos have interests in this action's outcome, specifically continued interests in accessing the Valles Caldera and worshiping on Redondo Peak. See supra FOFs ¶¶ 315-16, 319-21, 329, 341-44, 347-429, 528-30, 534-35, 535 n.170, at 138-39, 140-41, 146-47, 152-55, 157-205, 232-35, 237. The United States' presence as defendant, however, greatly reduces the potential prejudice to these other Pueblos' interests. As a practical matter, the United States' interest in defending its title to the Valles Caldera is "virtually identical" to that of these other Pueblos. Rishell v. Jane Phillips Episcopal Mem'l Med. Ctr., 94 F.3d at 1411. See Washington v. Daley, 173 F.3d 1158, 1167-68 (9th Cir. 1999)(concluding that Indian Tribes were not necessary parties to actions filed by State of Washington against Secretary of Commerce challenging regulation allocating groundfish catches to Tribes, inasmuch as the Secretary and the Tribes had virtually identical interests and the United States could therefore adequately represent the Tribes); 3A James Moore, Moore's Federal Practice ¶ 19.07[2.1], at 19-106 (2d ed. 1995)("[T]he fact that the absent person may be bound by the judgment does not of itself require his joinder if his interests are fully represented by parties present."). Trial establishes that these Pueblos' interests in the Valles Caldera are so aligned with the United States' interests to affirm the Court's prediction "that the United States will robustly defend against Jemez Pueblo's aboriginal title claim, and thereby defend the Pueblo of Santa Clara's interests in the United States' continued stewardship of the Valles Caldera." SJ Order at 7. See Davis v. United States, 343 F.3d at 1291-92 ("We note that in some cases the interests of the absent person are so aligned with those of one or more parties that the absent person's interests are, as a practical matter, protected."). For example, at trial, the United States presented testimony from members of Santa Clara Pueblo and Zia Pueblo, and, although these members' religious traditions prevented them from providing

specific details about their respective Pueblo's Valles Caldera use, they nonetheless answered many questions regarding their respective Pueblo's interest in the United States' continued Valles Caldera stewardship. See supra FOFs ¶¶ 349-409, at 158-191. Furthermore, the Court is not convinced that these Pueblos' absence would subject either party to this suit to a substantial risk of multiple or inconsistent obligations. As noted above, nothing in the record indicates the possibility of additional lawsuits involving this same subject matter. See Sac & Fox Nation of Missouri v. Norton, 240 F.3d at 1259 (citing 7 Federal Practice and Procedure § 1604, at 62 ("The key is whether the possibility of being subject to multiple obligations is real; an unsubstantiated or speculative risk will not satisfy the Rule 19(a) criteria.")).

387. Even assuming that other Pueblos could be considered necessary parties under rule 19(a), the Court is not persuaded that these other Pueblos are indispensable parties under rule 19(b). A necessary party can be considered an indispensable party only if, "in equity and good conscience," a court should not allow the action to proceed in the party's absence. Fed. R. Civ. P. 19(b). To make this determination, the Court must balance the following four factors set forth in rule 19(b):

> [F]irst, to what extent a judgment rendered in the person's absence might be prejudicial to the person or those already parties; second, the extent to which, by protective provisions in the judgment, by the shaping of relief, or other measures, the prejudice can be lessened or avoided; third, whether a judgment rendered in the person's absence will be adequate; fourth, whether the plaintiff will have an adequate remedy if the action is dismissed for nonjoinder.

Fed. R. Civ. P. 19(b). Applying these factors, the Court concludes that other Pueblos are not indispensable parties. With respect to the first factor, it is true that the other Pueblos have substantial interests in continued access to the Valles Caldera; however, as previously noted, the

United States' interest in defending its title to those lands offsets the potential of prejudice to other Pueblos' interests, which the Court concludes are substantially similar, if not virtually identical, to those of the United States. Because the potential for prejudice is minimal, the Court "need not be concerned with the second factor, which addresses the availability of means for lessening or avoiding prejudice." Rishell v. Jane Phillips Episcopal Mem'l Med. Ctr., 94 F.3d at 1412. With respect to the third factor, a judgment rendered in the other Pueblos' absence would be adequate in the Court's view because, regardless these Pueblos' presence or absence, the Court, as noted above, can grant the relief that Jemez Pueblo requests in the Complaint. Finally, and perhaps most important, there is no alternative forum in which Jemez Pueblo's QTA action can be heard; hence, this action is the only opportunity for Jemez Pueblo to challenge the United States' title to the Valles Caldera. See Sac & Fox Nation of Missouri v. Norton, 240 F.3d at 1260 (citing Kescoli v. Babbitt, 101 F.3d 1304, 1311 (9th Cir. 1996)(noting that a court should be "extra cautious" before dismissing an action pursuant to rule 19(b) if no alternative forum exists); Rishell v. Jane Phillips Episcopal Mem'l Med. Ctr., 94 F.3d at 1413 (noting that "[t]he absence of an alternative forum would weigh heavily, if not conclusively against dismissal")). The Court, therefore, declines to adopt the United States' position that the Pueblos of Cochiti, San Ildefonso, Santa Clara, Zia, and the Jicarilla Apache Nation's absence is sufficient to compel the Court to dismiss Jemez Pueblo's QTA action under rule 19.

II. THE ICCA'S STATUTES OF LIMITATION DO NOT BAR JEMEZ PUEBLO'S ABORIGINAL TITLE CLAIM.

388. In 1946, Congress enacted the ICCA to "dispose of the Indian claims problem with finality" and to "transfer from Congress to the Indian Claims Commission the responsibility for

determining the merits of Native American claims." United States v. Dann, 470 U.S. at 45. The ICCA gave the ICC "sweeping" authority to consider "all possible accrued claims" against the United States, including claims "of a purely moral nature," Navajo Tribe of Indians v. State of N.M., 809 F.2d at 1464-65, and imposed a five-year statute of limitations period "on Indian claims in law and equity then existing and arising under the Constitution, federal law, and treaties between Indian tribes and the United States," Oglala Sioux Tribe of Pine Ridge Indian Reservation v. U.S. Army Corps of Engineers, 570 F.3d 327, 331 (D.C. Cir. 2009); ICCA § 12. "Congress deliberately used broad terminology in the Act in order to permit tribes to bring all potential historical claims and to thereby prevent them from returning to Congress to lobby for further redress." Oglala Sioux Tribe of Pine Ridge Indian Reservation v. U.S. Army Corps of Engineers, 570 F.3d at 331. The ICCA, however, only "bars claims involving allotments or other property, claims involving title, claims to equitable relief, claims for damages, and related constitutional and procedural claims that accrued before 1946 and were not brought by August 13, 1951." Oglala Sioux Tribe of Pine Ridge Indian Reservation v. U.S. Army Corps of Engineers, 570 F.3d at 331-32. The ICCA also provides that "payment of any claim" discharged "all claims and demands touching any of the matters involved in the controversy." ICCA § 22. Moreover, ICCA § 24, now codified at 28 U.S.C. § 1505, vests in the Court of Claims and its successor court, the Court of Federal Claims, jurisdiction over "any claim against the United States accruing after August 13, 1946, in favor of any tribe," including claims for the land takings, 28 U.S.C. § 1505, and 28 U.S.C. § 2501 precludes petitioners from bringing such claims against the United States unless the "'petition is filed within six years after such claim first accrues,'" John R. Sand & Gravel Co. v. United States, 552 U.S. 130, 132 (2008)(quoting 28 U.S.C. § 2501 ("Every claim of which the United States Court of

Federal Claims has jurisdiction shall be barred unless the petition thereon is filed within six years after such claim first accrues.")).

389. The Court declines to adopt the United States' position that the Valles Caldera's private owners' pre-1946 interference with Jemez Pueblo's aboriginal uses is sufficiently substantial to trigger the ICCA statutes of limitation to which the Tenth Circuit refers as a potential bar to Jemez Pueblo's Valles Caldera claim. See supra COLs ¶¶ 194-95, at 350-51 (citing Pueblo of Jemez v. United States, 790 F.3d at 1166; id. at 1168 ("On the present record, we cannot say that either the Baca grant or use of the land by the Baca heirs or their successors establish as matter of law that the Jemez Pueblo had a pre-1946 claim against the government under the ICCA."). The trial establishes that Jemez Pueblo actually and continuously used the Valles Caldera, despite the private owners' restrictions, and that such use has continued through the present. These record facts demonstrate that no substantial interference occurred sufficient to cause Jemez Pueblo's aboriginal title claim to the Valles Caldera to accrue before 1946. Moreover, the United States has not persuaded the Court that the private owner's restrictions "involve some action on the part of Congress, either directly or through the President, that significantly affects an Indian Tribe's use of its historic lands." Pueblo of Jemez v. United States, Oct. 25 MOO at 118, 350 F. Supp. 3d at 1119.

390. The Court declines to adopt the United States' argument that, because the Pueblos of Jemez, Santa Ana, and Zia presented before the ICC evidence that they used a portion of the Valles Caldera in common, including Redondo Peak, Jemez Pueblo's ICC judgment precludes its claim here. See supra COLs ¶¶ 194-95, at 350-51. Both this Court and the Tenth Circuit have evaluated this argument fully, and the Court agrees with the Tenth Circuit that the United States'

"res judicata argument fails because the Jemez Pueblo's current claim is a quiet title action to establish that its aboriginal title to different land has not been extinguished." Pueblo of Jemez v. United States, 790 F.3d at 1171. See Pueblo of Jemez v. United States, Oct. 25 MOO at 9, 350 F. Supp. 3d at 1061 ("Baca Location No. 1, which included the area of the Valles Caldera, was not the subject of [Zia I-IV]."). The trial presents no new facts or argument that upsets the Court's prior conclusion.

391. The United States' argument that Jemez Pueblo's statements before the ICC regarding joint use of areas within the Valles Caldera, including Redondo Peak, are per se sufficient to defeat Jemez Pueblo's claim, is similarly unpersuasive, see supra COLs ¶¶ 129, at 317, because Jemez Pueblo's aboriginal title theory is that it satisfies the "exclusive use" requirement pursuant to one of the three established exceptions for joint-and-amicable, permissive, or dominant use, see supra FOFs ¶ 127 n.62, at 65; COLs ¶¶ 213, 224, 227, at 359-61, 363-64. Hence, the Court concludes that the fact that Jemez Pueblo representatives acknowledge using areas within the Valles Caldera jointly with other Pueblos is not sufficient, standing alone, to preclude an aboriginal title claim to the Valles Caldera.

392. The Court also declines to adopt the United States' argument that Jemez Pueblo's admissions that it lost both use of and interest in the Valles Caldera between 1951 and 2000 represent claim accrual for statutory limitations purposes. See supra COLs ¶ 196, at 351. Although the record reflects that Jemez Pueblo made numerous statements regarding the effects that private ownership of its aboriginal territory had on Jemez Pueblo, including physical, spiritual, and psychological harm, see supra FOFs ¶¶ 211-26, 229-37, at 96-104, the record also reflects that, these comments aside, Jemez Pueblo never abandoned those lands, see supra FOFs ¶¶ 431-524, at

205-231. Accordingly, the Court concludes that, because Jemez Pueblo's Valles Caldera use has continued unabated since time immemorial, Jemez Pueblo did not have a cognizable claim before the Court of Claims or its successor court, the Court of Federal Claims.

III. THE DOCTRINE OF LACHES DOES NOT BAR JEMEZ PUEBLO'S ABORIGINAL TITLE CLAIM.

393. The doctrine of laches "bars a party's dilatory claim . . . when there is: '(1) lack of diligence by the party against whom the defense is asserted, and (2) prejudice to the party asserting the defense.'" Biodiversity Conservation All. v. Jiron, 762 F.3d 1036, 1090-91 (10th Cir. 2014)(quoting Nat'l R.R. Passenger Corp. v. Morgan, 536 U.S. 101, 122 (2002)). "Laches is considered an equitable defense, controlled by equitable considerations. As with other equitable defenses, the existence of laches is a question primarily addressed to the discretion of the trial court." Mile High Industries v. Cohen, 222 F.3d 845, 857 (10th Cir. 2000)(internal quotation marks and citations omitted). Laches applies only to claims for equitable relief, and, accordingly, "'cannot be invoked to bar legal relief' '[i]n the face of a statute of limitations enacted by Congress.'" SCA Hygiene Prod. Aktiebolag v. First Quality Baby Prod., LLC, 137 S. Ct. 954, 959 (2017)(alterations in original)(quoting Petrella v. Metro-Goldwyn-Mayer, Inc., 572 U.S. 663, 679 (2014)). See Oneida County, New York v. Oneida Indian Nation of New York State, 470 U.S. at 245 n.16 ("[A]pplication of the equitable defense of laches in an action at law would be novel indeed.").

394. The Court declines to adopt the United States' argument that laches bars Jemez Pueblo's claim to the Valles Caldera, because Jemez Pueblo properly filed this action within the QTA's twelve-year limitations period. See United States v. Rodriguez-Aguirre, 264 F.3d at 1208

("When a limitation on the period for bringing suit has been set by statute, laches will generally not be invoked to shorten the statutory period."). The QTA provides that "[t]he United States may be named as a party defendant in a civil action under this section to adjudicate a disputed title to real property in which the United States claims an interest," and contains a twelve year statute of limitations which bars a party other than a state from filing suit unless "it is commenced within twelve years of the date upon which it accrued." QTA § 2409a(g). An action under the QTA accrues when the party "knew or should have known of the claim of the United States." QTA § 2409a(g). The United States does not dispute that Jemez Pueblo filed this action within twelve years of when, according to Jemez Pueblo, the claim accrued, but instead argues that the Court should apply laches because Jemez Pueblo's delay in filing its aboriginal title claim prejudices the United States, and other Pueblos and Tribes, given that the United States expended significant time and resources to acquire, restore, and maintain the Valles Caldera after other Pueblos and Tribes, including Jemez Pueblo, voiced strong support favoring United States' acquisition based on the understanding that the United States would adequately represent and protect their interests in the land. See COLs ¶ 291, at 349.

395. The Court cannot soundly say, however, on the record before it, that Jemez Pueblo needlessly delayed in presenting its claim. Jemez Pueblo contends that its claim accrued only when the United States acquired an interest in the Valles Caldera in 2000 and thereafter began limiting Jemez Pueblo's access to the land in a manner inconsistent with its aboriginal title, see Pueblo of Jemez v. United States, 790 F.3d at 1151-52; Complaint ¶ 68, at 11 ("Prior to the establishment of the Valles Caldera National Preserve in 2000, the United States never opposed or interfered with Jemez Pueblo's continued traditional use and occupancy of the area of the Valles

Caldera National Preserve pursuant to the Pueblo's aboriginal Indian title."), and the Tenth Circuit specifically tasked the Court to determine "whether, on remand, . . . Jemez Pueblo can factually establish aboriginal possession to the land it claims," thereby indicating that Jemez Pueblo's claim is properly before the Court, Pueblo of Jemez v. United States, 790 F.3d at 1163 n.15. The Court determined that the trial was necessary to resolve the factual disputes in this case, and although the Court in its findings concludes that Jemez Pueblo cannot satisfy the requirements necessary to prove aboriginal title to the Valles Caldera, the Court does not question Jemez Pueblo's belief that, since time immemorial, it has been the Valles Caldera's exclusive aboriginal user sufficient to satisfy the legal standard, and the Court will not foreclose Jemez Pueblo's efforts to prove that end. Accordingly, the Court stands by its previous ruling on this matter:

> [B]ecause Congress enacted a statute of limitations in the Quiet Title Act, because Jemez Pueblo brought this action pursuant to the statutory authority granted in the Quiet Title Act, and because Jemez Pueblo did so within the statutorily prescribed limitations period, this Court declines to apply laches to bar Jemez Pueblo's claim to the Valles Caldera.

SJ Order at 7-8 (citing United States v. Rodriguez-Aguirre, 264 F.3d at 1208).

IV. THE COURT WILL NOT INVOKE JUDICIAL ESTOPPEL TO PRECLUDE THE UNITED STATES' ARGUMENT THAT JEMEZ PUEBLO DOES NOT POSSESS ABORIGINAL TITLE TO THE VALLES CALDERA.

396. "The doctrine of judicial estoppel is designed 'to protect the integrity of the judicial process by prohibiting parties from deliberately changing positions according to the exigencies of the moment.'" BancInsure, Inc. v. F.D.I.C., 796 F.3d 1226, 1239 (10th Cir. 2015)(quoting New Hampshire v. Maine, 532 U.S. 742, 749-50 (2001)). Although the circumstances in which judicial estoppel applies are "not reducible to any general formulation of principle," the Supreme Court, nevertheless, has identified three relevant factors: (i) whether a party's later position is "'clearly

inconsistent'" with its former position; (ii) "whether the party 'succeeded in persuading a court to accept that party's earlier position, so that judicial acceptance of an inconsistent position in a later proceeding would create the perception that either the first or the second court was misled'"; and (iii) "'whether the party seeking to assert an inconsistent position would derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped.'" BancInsure, Inc. v. F.D.I.C., 796 F.3d at 1239 (quoting New Hampshire v. Maine, 532 U.S. at 750-51).

397. The Tenth Circuit applies the doctrine of judicial estoppel "both narrowly and cautiously," Hansen v. Harper Excavating, Inc., 641 F.3d 1216, 1227 (10th Cir. 2011)(quoting Bradford v. Wiggins, 516 F.3d 1189, 1194 n.3 (10th Cir. 2008)), because "judicial estoppel is a powerful weapon . . . and there are often lesser weapons that can keep alleged inconsistent statements in check while preserving a party's option to have its day in court," Vehicle Mkt. Research, Inc. v. Mitchell Int'l, Inc., 767 F.3d 987, 993 (10th Cir. 2014). See Asarco, LLC v. Noranda Mining, Inc., 844 F.3d 1201, 1207 (10th Cir. 2017)(stating that the moving party faces a "difficult task" given the court's "reluctance to impose the harsh remedy" of judicial estoppel); 18B Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, Federal Practice and Procedure § 4477 n.16 (2d ed. 2018)("Although the Tenth Circuit has come to recognize judicial estoppel, it has not come to love it.").

398. Moreover, the Tenth Circuit has concluded that "judicial estoppel only applies when the position to be estopped is one of fact, not one of law." BancInsure, Inc. v. F.D.I.C., 796 F.3d at 1239 (citing United States v. Villagrana-Flores, 467 F.3d 1269, 1279 (10th Cir. 2006)("[T]he existence of a Fourth Amendment violation is a legal position, not a factual one, and therefore the first judicial estoppel factor has not been satisfied.")); Kaiser v. Bowlen, 455 F.3d

1197, 1204 (10th Cir. 2006)("The stance taken in the tax return cannot give rise to judicial estoppel: in it, the Partnership is taking a legal position, not a factual one."); Johnson v. Lindon City Corp., 405 F.3d 1065, 1069 (10th Cir. 2005)("The requirement that a previous court has accepted the prior inconsistent factual position ensures that judicial estoppel is applied in the narrowest of circumstances."); Emergency One, Inc. v. Am. Fire Eagle Engine Co., 332 F.3d 264, 274 (4th Cir. 2003)("Judicial estoppel applies if the party to be estopped intentionally asserts a position of fact that is inconsistent with a factual position taken during previous litigation.").

399. The Court declines to adopt Jemez Pueblo's judicial-estoppel argument, first, because the United States' legal arguments in this case and in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman are not inconsistent. In United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, the United States does not admit that Jemez Pueblo has or ever had title to the Valles Caldera, but instead asserts a legal argument that "a tribe's long, uninterrupted occupation of land gives rise to an aboriginal water right." Supra FOFs ¶ 249, at 107-08. Moreover, the trial establishes that the United States' water rights claim on Jemez Pueblo's behalf in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman does not include water use within the Valles Caldera. See supra FOFs ¶ 249, at 107-08. Hence, Jemez Pueblo's claim in United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman is not inconsistent with the United States' opposition to that claim here.

400. Jemez Pueblo's judicial estoppel argument also does not satisfy the second factor, which requires the court to ask "whether the party 'succeeded in persuading a court to accept that party's earlier position, so that judicial acceptance of an inconsistent position in a later proceeding would create the perception that either the first or the second court was misled,'" BancInsure, Inc.

v. F.D.I.C., 796 F.3d at 1239 (quoting New Hampshire v. Maine, 532 U.S. at 750), because Jemez Pueblo does not account for the fact that Magistrate Judge Lynch declines to adopt the United States' legal position. Magistrate Judge Lynch recommends that Judge Vázquez "find that the Pueblos possessed aboriginal water rights prior to the Spanish occupation of New Mexico, but conclude that the Spanish crown exercised complete dominion and control over New Mexico in a manner adverse to the Pueblos and thus extinguished the Pueblos' aboriginal water rights," United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CV 83-1041 MV/WPL, 2016 U.S. Dist. LEXIS 191054, at *4, and although Magistrate Judge Lynch states that Spain generally "appears to have recognized aboriginal title to land," he also states:

> "[W]hen an Indian tribe ceases for any reason, by reduction of population or otherwise, to actually and exclusively occupy and use an area of land clearly established by clear and adequate proof, such land becomes the exclusive property of the United States as public lands," as such, "the Indians lose their right to claim and assert full beneficial interest and ownership to such land,"

United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CV 83-1041 MV/WPL, 2016 WL 9776586, at *2 (quoting Quapaw Tribe v. United States, 120 F. Supp. 283, 286 (Ct. Cl. 1954)). Hence, because Judge Vázquez adoped Magistrate Judge Lynch's proposed findings, see United States ex rel. Pueblos of Jemez, Santa Ana & Zia v. Abousleman, No. CV 83-1041 MV/WPL, 2017 WL 4364145, at *4, the Court further concludes that the United States could not stand to benefit unfairly from its arguments in that case regardless whether inconsistent with the arguments that the United States presents here.

401. Moreover, any ostensible inconsistency regarding criteria sufficient to prevail on an aboriginal title claim would involve solely legal arguments; however, pursuant to Tenth Circuit precedent, "'the position to be estopped must generally be one of fact rather than of law or legal

theory.'" United States v. Supreme Court of New Mexico, 839 F.3d 888, 912 (10th Cir. 2016) (quoting Johnson v. Lindon City Corp., 405 F.3d at 1069; and citing BancInsure, Inc. v. F.D.I.C., 796 F.3d at 1240 ("Notably, we have held that judicial estoppel only applies when the position to be estopped is one of fact, not one of law.")); United States v. Villagrana-Flores, 467 F.3d at 1279 ("Even if we were to agree that the government took two clearly conflicting positions, . . . the existence of a Fourth Amendment violation is a legal position, not a factual one, and therefore the first judicial estoppel factor has not been satisfied.")). The factors requisite to establish, maintain, and extinguish aboriginal title form the basis for legal arguments. Therefore, even if the United States has presented conflicting arguments regarding such factors, pursuant to Tenth Circuit precedent, the judicial-estoppel doctrine is inapposite.

V. JEMEZ PUEBLO HAS NOT ESTABLISHED THAT IT EVER POSSESSED ABORIGINAL TITLE TO THE VALLES CALDERA.

402. To establish aboriginal title, Jemez Pueblo must demonstrate by a preponderance of the evidence "'actual, exclusive, and continuous use and occupancy'" of the Valles Caldera "'for a long time.'" Pueblo of Jemez v. United States, 790 F.3d at 1165 (quoting Sac & Fox Tribe of Indians of Okla. v. United States, 383 F.2d at 998). To satisfy its burden to establish exclusive aboriginal use, Jemez Pueblo "'must show that it used and occupied the land to the *exclusion of other Indian groups*,'" Pueblo of Jemez v. United States, 790 F.3d at 1165-66 (emphasis added by the Tenth Circuit in Pueblo of Jemez v. United States)(quoting Pueblo of San Ildefonso, 513 F.2d at 1394)), and that it "'exercised control over [the claimed area] and over other Indians who may have ventured therein,'" Pueblo of Jemez v. United States, 790 F.3d at 1166 (modification in original)(quoting Caddo Tribe of Okla. v. United States, 35 Ind. Cl. Comm. at 358-60).

Dominion and control sufficient to confer land ownership "'is called in question where the historical record of the region indicates that it was inhabited, controlled or wandered over by many tribes or groups. Ordinarily, where two or more tribes inhabit an area no tribe will satisfy the requirement of showing such 'exclusive' use.'" Pueblo of Jemez v. United States, Oct. 25 MOO at 81, 350 F. Supp. 3d at 1098 (quoting United States v. Pueblo of San Ildefonso, 513 F.2d at 1394).

A. JEMEZ PUEBLO HAS ACTUALLY AND CONTINUOUSLY USED THE VALLES CALDERA FOR A LONG TIME.

403. Evidence presented at trial shows that Jemez Pueblo actually and continuously used the Valles Caldera. Such evidence is sufficient to satisfy the actual land use and occupancy requirements to prove aboriginal title to the Valles Caldera. Moreover, third-party actions have not impacted Jemez Pueblo's Valles Caldera use and occupancy in a manner sufficient to defeat Jemez Pueblo's Valles Caldera claim.

1. Jemez Pueblo Historically Used the Valles Caldera in a Manner Sufficient to Establish Aboriginal Title.

404. Actual use and occupancy necessary to establish aboriginal title is a question of fact, see Santa Fe, 314 U.S. at 345 (1941); Pueblo of Jemez v. United States, 790 F.3d at 1165, which must account for a Tribe's specific "habits and modes of life," Mitchel v. United States, 34 U.S. at 746. See also United States v. Seminole Indians of State of Fla., 180 Ct. Cl. at 384 ("Had the Seminoles chosen to live by food-raising alone, we would regard the 'village' evidence . . . as . . . persuasive . . . in limiting the Seminoles' 'title' to the land falling within . . . their permanent homesites, . . . [b]ut the Seminoles . . . survived . . . by food-gathering and hunting as well. . . . Seminole land-use . . . encompassed more than the soil actually

'possessed.'"). Moreover, such traditional habits and modes also include intermittent or seasonal land use. See United States v. Seminole Indians of State of Fla., 180 Ct. Cl. at 385-86 ("[T]he 'use and occupancy' . . . essential to the recognition of Indian title does not demand *actual* possession of the land, but may derive through intermittent contacts . . . which define some general boundaries of the occupied land." (quoting Spokane Tribe v. United States, 163 Ct. Cl. at 66); Native Villages of Eyak, 688 F.3d at 623 ("[I]ntermittent or seasonal use is sufficient to support aboriginal title because it's consistent with the seasonal nature of the ancestors' way of life as hunters and fisherman."); Confederated Tribes of the Warm Springs Reservation of Oregon v. United States, 177 Ct. Cl. at 194 ("'Continuous' use does not limit recovery to areas where the tribe had permanent villages, but also includes seasonal or hunting areas over which the Indians had control even though those areas were used only intermittently." (quoting Spokane Tribe v. United States, 163 Ct. Cl. at 66)).

405. The Tenth Circuit held in this case that, to satisfy the "actual and continuous use" requirement, Jemez Pueblo must show that "the Jemez people have continued for hundreds of years to use the Valles Caldera for traditional purposes, including hunting, grazing of livestock, gathering of medicine and of food for subsistence and the like," Pueblo of Jemez v. United States, 790 F.3d at 1166, but this requirement does not demand that Jemez Pueblo use every square foot of land within its aboriginal territory, provided such unused land is "barren, inaccessible, or useless," Tlingit and Haida Indians, 147 Ct. Cl. at 328 ("[W]here the Indians have proved that they used and occupied a definable area of land, the barren, inaccessible or useless areas encompassed within such an overall tract . . . have not been eliminated from the area of total ownership."). For example, in Zuni Tribe of New Mexico v. United States, the Claims Court emphasizes the claim

area's "highly varied physical environment," which "requires an extensive and flexible land use system so that if a particular resource is not available at one place when it is needed it can be obtained elsewhere." 12 Cl. Ct. at 611. The Claims Court states that, given the variations in precipitation and climate, the Zuni required "a relatively large 'sustaining area,'" and that agriculture and livestock use "would likewise vary." Zuni Tribe v. United States, 12 Cl. Ct. at 612, 615-16. Such variations created "a rich diversity of wild plants and animals found within the claim area" that "provided the Zunis with adequate food and materials to sustain life." 12 Cl. Ct. at 612-13. Hence, the Claims Court concludes, "[t]he entire claim area was used by the Zuni for one purpose or another including: habitation . . . and . . . farming, hunting, grazing, gathering, and religious worship." 12 Cl. Ct. at 641.

406. Jemez Pueblo showed at trial that it actually and continuously used and occupied the Valles Caldera for a long time in its traditional Indian ways. Ancestral Jemez Pueblo members migrated to the Jemez Mountains in the 1200s and, between 1300 and 1700 C.E., built within the northern Rio Jemez watershed thirty-five villages and thousands of fieldhouses -- primarily for agricultural purposes -- approximately 100 of which were on the Banco Bonito in the Valles Caldera's southwest quadrant. See supra FOFs ¶¶ 52, 64, 66, at 25, 36. Ancestral Jemez people typically occupied their fieldhouses for at least ninety days during growing seasons, although they also used these fieldhouses to hunt game, to gather medicinal plants, to move about the landscape, and to demarcate territory. See supra FOFs ¶¶ 67-68, at 36-37. Moreover, Jemez peoples left distinctive Jemez Black-on-white pottery throughout the Valles Caldera, and harvested obsidian from the Valles Caldera's Cerro del Medio quarry. See supra FOFs ¶¶ 82, 99, 107-109, at 47, 53,

57-58. The Court therefore concludes that Jemez Pueblo showed at trial actual and continuous Valles Caldera use for a long time.

2. Spanish Constraints on Jemez Pueblo Did Not Disturb Jemez Pueblo's Actual and Continuous Valles Caldera Use Sufficient to Preclude Jemez Pueblo's Aboriginal Title Claim.

407. Mere Spanish sovereignty over the Valles Caldera is insufficient to affect Jemez Pueblo's actual and continuous Valles Caldera use to preclude its aboriginal title claim, because "[t]he Spanish . . . government[] recognized the Pueblos' land titles."[236] New Mexico v. Aamodt, 537 F.2d at 1108. See Santa Fe, 314 U.S. at 347 ("Nor is it true, . . . that a tribal claim to any particular lands must be based upon a treaty, statute, or other formal government action."); Pueblo of Jemez v. United States, 790 F.3d at 1158 n.11 ("[A] tribe's aboriginal title does not require an affirmative act of the sovereign for its continued viability.") For example, the Claims Court has concluded that, regarding Zuni Pueblo, "the Spanish . . . recognized the Zunis' right to, and permitted the Zunis to, continue such use and occupancy of lands as they had been accustomed to prior to the assumption of . . . Spanish[] jurisdiction (i.e., to the lands the Zuni had used since time

[236]Indeed, as the Tenth Circuit notes in this case, the Spanish first conceived the aboriginal title doctrine:

> The main concepts of aboriginal title can be traced back to "Spanish origins, and particularly to doctrines developed by Francisco de Victoria, the real founder of modern international law." . . . The doctrine of Victoria essentially proposed that discovery of new lands gave "title to lands not already possessed," but because the "Indians were true owners, both from the public and the private standpoint, the discovery of them by the Spanish had no more effect on their property than the discovery of the Spaniards by the Indians had on Spanish property."

Pueblo of Jemez v. United States, 790 F.3d at 1152-53 (internal citations omitted)(quoting Felix Cohen, Original Indian Title at 44-45).

immemorial)." Zuni Tribe of New Mexico v. United States, 12 Cl. Ct. at 653 n.14. Moreover, historic Spanish land grants to Tribes do not per se preclude aboriginal title claims to lands beyond such grants. See Zia et al. v. United States, 11 Ind. Cl. Comm. at 164 ("We believe that the [Mohave Tribe of Indians v. United States, 7 Ind. Cl. Comm. 219], and Santa Fe decisions give petitioners the same rights to aboriginal title as those given to other Indian tribes in this area in spite of their having received valid Spanish grants."); Zia II, 165 Ct. Cl. at 507 (noting without disagreement the ICC's assertion in Zia et al. v. United States regarding aboriginal title claims to lands beyond Spanish grants).

408. Moreover, given the paucity of specific evidence regarding traditional aboriginal activities in the Jemez Mountains during the Spanish colonial period, the Court credits the conclusions that historians draw to infer that such use occurred based on specific use evidence from the pre-Spanish period. See Pueblo of Jemez v. United States, Oct. 25 MOO at 79, 350 F. Supp. 3d at 1096-97 ("[F]actual support for an aboriginal title claim may include: . . . expert testimony of historians in the field of American history." (citing Otoe & Missouria Tribe v. United States, 131 F. Supp. at 289-91)); supra FOFs ¶ 137 n.71, at 71-72 ("A historian, however, can make an educated inference that Jemez Pueblo's Valles Caldera use continued based on past uses and present uses.").

409. The trial establishes that, although the Spanish forcibly removed virtually all Jemez Pueblo members to Walatowa beginning in 1598 C.E., Jemez Pueblo nevertheless resisted Spanish removal efforts, and returned several times to their ancestral Jemez Mountains villages before and after the Pueblo Revolt. See supra FOFs ¶¶ 142-44, 145, at 74-75. Such resistance periods included maintaining all traditional Indian activities throughout Jemez Pueblo's aboriginal

territory, including the Valles Caldera, at least until Spanish military forces decisively defeated Jemez Pueblo in 1696 C.E. See supra FOFs ¶¶ 152, 153 n.83, at 78-79. Spain thereafter granted Jemez Pueblo 17,500 acres extending from Walatowa's center and designated the Valles Caldera as public domain land, and although the Court disagrees with Jemez Pueblo that through this designation Spain recognized that the Pueblos could continue to use the lands they had traditionally used before the Spanish arrived or that Jemez Pueblo had any property interest in the Valles Caldera, the Court concludes that the public-lands designation facilitated Jemez Pueblo's ability to continue to use the Valles Caldera for traditional activities such as grazing livestock and collecting herbs. See supra FOFs ¶¶ 144 n.76, 146-50, at 77. Moreover, Spain encouraged Jemez Pueblo's traditional agricultural and artisanal activities given that such activities ensured Jemez Pueblo's ability to pay tribute to Spain. See supra FOFs ¶ 144 n.76, at 75. Spain did not recognize, however, Jemez Pueblo's religion, and the Spanish repressed Jemez Pueblo's religious exercise, including pilgrimages to Redondo Peak. See supra FOFs ¶¶ 144 n.76, 146 n.77, 150 n.79, 152 n.81, 154 n.84, at 75-80.

410. The United States argues that the trial establishes that, by the 1600s, disease and warfare with the Spanish decimated Jemez Pueblo's population, which enabled the Spanish to forcibly remove Jemez Pueblo to Walatowa, and that, by 1744 C.E., Jemez Pueblo's population had plummeted to as low as 100 individuals living twenty miles from Redondo Peak, thereby, effectively foreclosing Jemez Pueblo's ability to use the Valles Caldera, according to the United States. See supra FOFs ¶ 150 n.79, at 77, COLs ¶ 200, at 353. The Court concludes, however, that, despite these significant restrictions and constraints, which resulted in a sizable decrease in

Jemez Pueblo's population, Jemez Pueblo nevertheless did not cease its actual and continuous Valles Caldera use during the Spanish colonial period. See supra FOFs ¶¶ 156-61, at 81-83.

3. Mexican Sovereignty Had No Effect on Jemez Pueblo's Actual and Continuous Valles Caldera Use.

411. In 1821, the Mexican revolutionary government adopted the Plan of Iguala,[237] which declared that "[a]ll inhabitants of New Spain, without any distinction between Europeans, Africans, or Indians, are citizens of this Monarchy . . . and that the person and property of every citizen will be respected and protected by the government." Pueblo of Jemez v. United States, 790 F.3d at 1153. Shortly thereafter, Mexico assumed sovereignty over the Valles Caldera through the Treaty of Cordova. See Pueblo of Jemez v. United States, 790 F.3d at 1153 ("The Treaty of Cordova between Spain and Mexico, ratified on August 24, 1821, . . . established Mexican Independence."). The Treaty of Cordova adopted the principles that the Plan of Iguala sets forth and, thus, respected and protected the Pueblos' real property interests. See Pueblo of Jemez v. United States, 790 F.3d at 1153 ("The Treaty of Cordova between Spain and Mexico, ratified on August 24, 1821, adopted the principles set forth in the Plan of Iguala and established Mexican Independence."); United States v. Ritchie, 58 U.S. 525, 538 (1854)(quoting Plan of Iguala); New Mexico v. Aamodt, 537 F.2d at 1108 ("Mexican governments recognized the Pueblos' land titles.").

412. The land grants that Mexico issued to non-Indians are subject to the Pueblos' right of occupancy. See Johnson v. M'Intosh, 21 U.S. at 574 (asserting that sovereign-nation land grants

[237]The Tenth Circuit refers to the Plan of Iguala as a "revolutionary proclamation." Pueblo of Jemez v. United States, 790 F.3d at 1153.

to non-Indians "have been understood by all, to convey a title to the grantees, subject only to the Indian right of occupancy"). Moreover, the laws protecting the Pueblos' property rights remained substantially the same as during the Spanish and Mexican regimes, and permitted the Pueblos to use and occupy their aboriginal lands as they had been accustomed to before Mexico came into existence; for example, the Claims Court has concluded that "the Mexicans, as the Spanish before them, recognized the Zunis' right to, and permitted the Zunis to, continue such use and occupancy of lands as they had been accustomed to prior to the assumption of Mexican . . . jurisdiction (i.e., to the lands the Zuni had used since time immemorial)." Zuni Tribe of New Mexico v. United States, 12 Cl. Ct. at 653 n.14.

413. At the trial, neither party presented evidence that Mexico legislated regarding, or otherwise affected, the Valles Caldera. The record indicates that the Mexican government was virtually absent from the Jemez Mountains during the Mexican period, which spanned from 1821 to 1848, and is otherwise silent regarding Jemez Pueblo's actual and continuous Valles Caldera use after Mexico assumed sovereignty over those lands. See supra FOFs ¶ 170 n.95, at 86. Hence, absent specific evidence to the contrary, the Court concludes that Jemez Pueblo continued to actually and continuously use the Valles Caldera during the Mexico period.

4. Jemez Pueblo Actually and Continuously Used the Valles Caldera After the United States Acquired Sovereignty Over Those Lands.

414. The Treaty of Guadalupe Hidalgo transferred sovereignty over the Valles Caldera from Mexico to the United States. See Treaty of Guadalupe Hidalgo, 9 Stat. 922. "In the Treaty of Guadalupe Hidalgo, the United States agreed to protect rights recognized by prior sovereigns," New Mexico v. Aamodt, 537 F.2d at 1108-09, and guaranteed that it would honor the aboriginal

Indian title to the Pueblos' land throughout the area that Mexico ceded to the United States, see Pueblo of Jemez v. United States, 790 F.3d at 1156 (citing Treaty of Guadalupe Hidalgo, 9 Stat. 922, 928)("In Article VIII of the Treaty, the United States agreed to respect pre-existing property rights of all Mexican citizens, which included the Indians living within the territory covered by the Treaty."). Read together with the Plan of Iguala and the Treaty of Cordova, "Article VIII of the Treaty between Mexico and the United States effectively recognized the then-existing property rights of the pueblo Indians." Pueblo of Jemez v. United States, 790 F.3d at 1156. Moreover, the United States in this case concedes that, in Article VIII of the Treaty of Guadalupe Hidalgo, the United States agrees to respect all Mexican citizens' pre-existing property rights, which includes the Indians living within the territory that the Treaty of Guadalupe Hidalgo covers. See Pueblo of Jemez v. United States, 790 F.3d at 1156 ("The government concedes this much in its brief on appeal." (citing Response Brief for the United States at 7-8, filed July 17, 2014 (Doc. 01019280803 on the Tenth Circuit's docket)).

415. Unlike the Mexican government, the United States maintained an active presence in the Jemez Mountains following New Mexico's acquisition from Mexico in 1848. See FOFs ¶¶ 171-72, 175, 177-83, 185-86, 188, at 86-91. For example, in 1851, United States Army contractors established a hay camp within the Valles Caldera and thereafter defended the camp against Navajo attacks. See supra FOFs ¶¶ 171-74, at 86-87. In 1856, New Mexico militiamen tracked Navajo raiders into the Valle Grande. See supra FOF ¶ 175, at 87. Moreover, in August, 1863, the United States Army established a forty-man military outpost on the Valle Grande and continuously operated the Valle Grande outpost until May, 1864. See supra FOFs ¶¶ 177-80, at 87-88.

416. The Court declines to adopt the United States' reliance on Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. at 787-88, for the assertion that that, in constructing and manning the Valles Grande outpost, which the United States refers to as a "fort," the United States extinguished aboriginal rights to the Valles Caldera. United States' Br. at 73 (citing Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. at 787-88 ("Even if Indians continued to occupy some portion of the Fort's land, . . . a military base destroys the exclusivity prong of the aboriginal title test. . . . That the government established a military outpost is even more inconsistent with Indian title than occupation by white settlers.")). To begin, the United States does not argue how the outpost satisfies the criteria that the Court identifies in the Court's extinguishment analysis. See Pueblo of Jemez v. United States, Oct. 25 MOO at 118-19, 350 F. Supp. 3d at 1119. Moreover, the United States does not account fully for the fact that the Tribe in Uintah Ute Indians of Utah v. United States, "in effect, concede[d] that it had not actually, exclusively, and continuously occupied the subject land up to 1991, the alleged taking date." 28 Fed. Cl. at 787. Rather than concluding that a temporary military encampment extinguishes aboriginal Indian title, the Court of Federal Claims in Uintah Ute Indians of Utah v. United States determined, based on undisputed facts, that the Tribe left the claim area after the United States Army built, officially inaugurated, and expanded multiple times over several decades a permanent military fort that remained in operation until 1991. See Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. at 787. Hence, the question in Uintah Ute Indians of Utah v. United States was abandonment and not extinguishment. Here, the Valles Grande outpost was in operation only for ten months, most of which occurred during the winter season. See supra FOFs ¶¶ 177-80, at 87-88. The United States Army built the outpost to support its campaign against the Navajos, and the Army neither officially

inaugurated nor expanded it. See supra FOFs ¶¶ 177-80, at 87-88. Significantly, the Army abandoned the outpost in 1863, see supra FOFs ¶¶ 180, at 88, and, unlike the evidence in Uintah Ute Indians of Utah v. United States, the record here contains no evidence of "Indian departure from the lands encompassed" by the outpost, Uintah Ute Indians of Utah v. United States, 28 Fed. Cl. at 768. Therefore, the Valles Grande outpost does not factor into the Court's analysis whether Congress intended to extinguish aboriginal rights to the Valles Caldera.

417. The record from this period also evidences that Jemez Pueblo members actively used the Valles Caldera to graze and defend livestock, to launch attacks against Navajo Nation members, and to traverse the Valles Grande unimpeded while en route to other destinations within the Jemez Mountains. See supra FOFs ¶¶ 174, 176-77, 180, 188, at 87-91. The Court concludes that such evidence is sufficient to prove that Jemez Pueblo actually and continuously used the Valles Caldera after the United States acquired New Mexico from Mexico.

5. The Grant to the Baca Heirs Does Not Preclude Jemez Pueblo's Aboriginal Title Claim.

418. Congress in 1854 established the office of Surveyor General for New Mexico and ordered the Surveyor General "to ascertain the origin, nature, character, and extent of all claims to lands under the laws, usages, and customs of Spain and Mexico," and to report on the validity of claims that "originated before the cession of the territory to the United States . . . denoting the various grades of title, with his decision as to the validity or invalidity of each of the same under the laws, usages, and customs of the country before its cession to the United States." Act of July 22, 1854, 10 Stat. 308 ("1854 Act"); Pueblo of Jemez v. United States, 790 F.3d at 1156 (quoting the 1854 Act). Congress also ordered a report "in regard to all pueblos existing in the Territory,

showing the extent and locality of each, stating the number of inhabitants in the said pueblos, respectively, and the nature of their titles to the land." 10 Stat. at 308; Pueblo of Jemez v. United States, 790 F.3d at 1156 (quoting the 1854 Act). The report "shall be laid before Congress for such action thereon as may be deemed just and proper, with a view to confirm bona fide grants, and give full effect to the treaty." 10 Stat. at 308; Pueblo of Jemez v. United States, 790 F.3d at 1156 (quoting the 1854 Act).

419. Based on the Surveyor General's report, Congress in 1860 passed an act to settle a Mexican land-grant dispute between the town of Las Vegas, New Mexico, and the heirs of Luis Maria Cabeza de Baca by allowing the town to retain title over the contested land and authorizing the Baca heirs "to select instead of the land claimed by them, an equal quantity of vacant land, not mineral, in the Territory of New Mexico, to be located by them in square bodies, not exceeding five in number." Act of June 21, 1860, 12 Stat. 71, 72 ("1860 Act"); Shaw v. Kellogg, 170 U.S. 312, 314 (1898)(quoting the 1860 Act). Hence, the 1860 Act required the Surveyor General to authorize transfer if the lands were vacant and non-mineral, and to forbid transfer if the lands did not meet the statutory requirements. See Shaw v. Kellogg, 170 U.S. at 330, 338. The Baca heirs selected land that encompasses the Valles Caldera, and the Surveyor General accordingly approved their selection based on his belief that the land was vacant. See Pueblo of Jemez v. United States, 790 F.3d at 1157. Through the 1860 Act, Congress also confirmed, on the Surveyor General's recommendation, several other private land claims arising under the Treaty of Guadalupe Hidalgo. See Pueblo of Jemez v. United States, 790 F.3d at 1157.

420. The United States argues that the "United States' grant to the Baca heirs conveyed 'full, absolute, and unconditional title' that was 'not subject to challenge,'" United States' Br. at

71 (quoting Shaw v. Kellogg, 170 U.S. at 343), because, according to the United States, "Congress did 'not contemplate[] that the title [to the Baca locations] should remain unsettled,'" United States' Br. at 71 (quoting Shaw v. Kellogg, 170 U.S. at 331 (alterations in United States' Br.)); however, as the Tenth Circuit notes in this case, "the [1860] Act declared in section 4 '[t]hat the foregoing confirmation shall only be construed as quit-claims or relinquishments, on the part of the United States, *and shall not affect the adverse rights of any other person or persons whomsoever*,'" Pueblo of Jemez v. United States, 790 F.3d at 1157 (quoting the 1860 Act (emphasis in Pueblo of Jemez v. United States)). Accordingly, the Court declines to adopt the United States' argument that the 1860 Act and grant to the Baca heirs extinguished as a matter of law Jemez Pueblo's alleged aboriginal title. See Pueblo of Jemez, 790 F.3d 1164-65 ("[T]he Baca heirs were granted fee title subject to any pre-existing aboriginal occupancy rights of the Jemez Pueblo."). Moreover, the Court notes that, as a matter of law, there is no language in the 1860 Act that purports to extinguish aboriginal title. See Pueblo of Jemez v. United States, 790 F.3d at 1170 ("[A]boriginal title cannot be extinguished by the grant to a third party of fee title to the land at issue except by clear and unambiguous congressional intent."). Congress did not link the 1860 Act or subsequent Baca grant to a specific or broader attempt to open Indian lands to non-Indian settlement, but merely acted to settle conflicting land claims between Las Vegas, New Mexico inhabitants and Baca's successors in interest. See Pueblo of Jemez v. United States, Oct. 25 MOO at 6-7, 350 F.Supp.3d at 1059-60 ("Congress settled this conflict by allowing the inhabitants of Las Vegas to retain title over the contested land and passing a statute authorizing the Baca heirs 'to select . . . vacant land, not mineral, in the Territory of New Mexico.'" (quoting 1860 Act)).

421. The Court further concludes that the Surveyor General's conclusion that the Valles Caldera lands were vacant before the 1860 Act is of no import, as the Surveyor General lacked authority to extinguish aboriginal Indian title. See Pueblo of Jemez v. United States, 790 F.3d at 1163 ("[T]he conclusion of the Surveyor General of New Mexico that the lands at issue were vacant and thus could be transferred to the Baca heirs did not by itself serve to extinguish existing aboriginal title."); id. at 1164 ("It therefore makes no difference that the Surveyor General believed the land selected by the Baca heirs was vacant. He had no authority to extinguish the Jemez Pueblo's aboriginal title."); Pueblo of Jemez v. United States, Oct. 25 MOO at 42, 350 F. Supp. 3d at 1077-78 ("[B]ecause the Surveyor-General had no authority to extinguish aboriginal title, his belief as to vacancy of the lands is irrelevant"). Absent a demonstrable congressional intent to extinguish pre-existing aboriginal rights to the Valles Caldera, "the grant 'asserted a title against Europeans only and was considered as blank paper so far as the rights of natives were concerned.'" Pueblo of Jemez v. United States, Oct. 25 MOO at 77, 350 F. Supp. 3d at 1096 (quoting Worcester v. Georgia, 31 U.S. at 546). Having no such congressional intent, the 1860 Act permitting the Baca heirs to acquire the Valles Caldera was insufficient to preclude Jemez Pueblo's aboriginal title claim to those lands.

6. Despite Private Owners' Restrictions, Jemez Pueblo Actually and Continuously Used the Valles Caldera in a Manner Sufficient to Maintain an Aboriginal Title Claim.

422. To satisfy aboriginal title's actual-and-continuous use requirement, Jemez Pueblo need not prove that the Baca heirs and their successors did not use the Valles Caldera, see Pueblo of Jemez v. United States, 790 F.3d at 1172; Pueblo of Jemez v. United States, Oct. 25 MOO at 46, 350 F. Supp. 3d at 1080, or that Jemez Pueblo did not expel the Valles Caldera's non-Indian

occupants, because simultaneous land occupancy and use under European title and under aboriginal title can -- and often does -- occur given that Indian occupancy differs significantly from non-Indian occupancy, see Pueblo of Jemez v. United States, 790 F.3d at 1165; Pueblo of Jemez v. United States, Oct. 25 MOO at 46, 350 F. Supp. 3d at 1080. The Tenth Circuit in this case affirmed as much when it stated:

> [I]t is easy to see how the Surveyor General may have mistakenly believed the lands were vacant even if they were being used by the Jemez for hunting, fishing, and other such activities. Similarly, it is also easy to see how a peaceful and private Indian pueblo might have used portions of this large area of land for its traditional purposes while one agreeable rancher was using portions of it for grazing livestock.

Pueblo of Jemez v. United States, 790 F.3d at 1165. Therefore, non-Indian use and occupancy evidence does per se preclude an aboriginal title claim.

423. The Court declines to adopt the United States' contention that "interference by the Preserve land's private owners with Plaintiff's alleged aboriginal uses prior to 2000, standing alone, is sufficient to defeat any claim to aboriginal title." United States' Proposed Conclusions ¶¶ 80, at 20. The United States bases this assertion on the Tenth Circuit's conclusion that "if there was actually substantial interference by others with these traditional uses . . . Jemez Pueblo will not be able to establish aboriginal title."[238] United States' Br. at 74 (quoting Pueblo of Jemez v.

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[238]The full quotation states:

> As the cases make clear, if there was actually substantial interference by others with these traditional uses before 1946, the Jemez Pueblo will not be able to establish aboriginal title. In that circumstance, moreover, the Pueblo would be barred by the ICCA statute of limitations for failing to bring a claim before the ICC.

Pueblo of Jemez v. United States, 790 F.3d at 1166. Although the Court agrees that others' "substantial interference" with Jemez Pueblo's traditional uses of the Valles Caldera would prevent Jemez Pueblo from establishing aboriginal title to the Valles Caldera, the Tenth Circuit's

United States, 790 F.3d at 1166). This statement does not, however, stand for the United States' proposition that "[t]he Tenth Circuit, relying in part on precedents of the Court of Claims, held that federal conveyance of land to private parties, and encroachment on traditional Tribal use, can evidence extinguishment of aboriginal title," United States' Br. at 75 (citing Pueblo of Jemez v. United States, 790 F.3d at 1166-67), in part, because the Court must consider the Tenth Circuit's comment alongside controlling Supreme Court precedent, and the Supreme Court has held that congressional intent to extinguish aboriginal title must be "plain and unambiguous," Santa Fe, 314 U.S. at 346. Hence, the Court concludes that, to defeat Jemez Pueblo's aboriginal title claim, the "interference" to which the Tenth Circuit refers must be sufficiently "substantial" to compel Jemez Pueblo to cease altogether its Valles Caldera use for traditional, aboriginal purposes. Pueblo of Jemez v. United States, 790 F.3d at 1166. The Court therefore considers any such interference not in a vacuum but rather for the effect that the interference had on Jemez Pueblo's ability to conduct its traditional activities within the Valles Caldera, specifically whether the interference compelled Jemez Pueblo not to use the Valles Caldera during the private ownership period.

424. As further evidence for its position that substantial interference, standing alone, is sufficient to preclude Jemez Pueblo's aboriginal title claim, the United States asserts that the Tenth

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reference to the ICCA statute of limitations for failure to bring a claim for loss of aboriginal title leads the Court to conclude that the Tenth Circuit is referring to title extinguishment -- not establishment -- because each of the cases that the Tenth Circuit cites in this context speak to whether the ICC claimants' aboriginal title was extinguished. See Pueblo of Jemez v. United States, 790 F.3d at 1166-68. In other words, the Tenth Circuit assumes arguendo that Jemez Pueblo once had aboriginal title and concludes that others' interference with Jemez Pueblo's actual and continuous Valles Caldera use could effect a pre-1946 taking, i.e., extinguishment, if such interference was sufficiently substantial to compel Jemez Pueblo to cease using those lands. Hence, the Court in this section addresses the United States' argument that such interference, standing alone, is sufficient to extinguish aboriginal title.

Circuit cites to the Court of Claims' decision in United States v. Pueblo of San Ildefonso "as illustrating how interference defeats a claim of actual and continuous use." United States' Br. at 74 (citing Pueblo of Jemez v. United States, 790 F.3d at 1166 ("The Court of Claims' decision in *Pueblo of San Ildefonso*, . . . is illustrative of a situation in which white settlement and use, authorized by the federal government both statutorily and in fact, brought about a pre-1946 claim against the United States for failure to protect aboriginal title of the pueblos.")). The United States, however, does not account fully for the fact that the Tenth Circuit also cites the Court of Claims' conclusion that authorized white settlement and use "is only one of various factors to be considered in determining when specific lands were *taken*," Pueblo of Jemez v. United States, 790 F.3d at 1167 (quoting United States v. Pueblo of San Ildefonso, 513 F.2d at 1390)(emphasis added)), and that the Court of Claims' takings analysis also accounts for Congress creating for the Pueblos a reservation on their historic lands, counting other Tribal lands in a national forest reserve, and granting the Pueblos' remaining lands to non-Indian settlers under the public land laws, see United States v. Pueblo of San Ildefonso, 513 F.2d at 1383. Significantly, the Court of Claims concluded that, standing alone, the reservation's creation was insufficient to extinguish aboriginal title to lands not included in the reservations' borders. See 513 F.2d at 1388. The taking occurred only when federal land laws granted non-Indians the right to settle particular lands. See 513 F.2d at 1391. The Court of Claims rejected the argument that non-Indian encroachment could result in the loss of aboriginal title when the affected Tribe did not voluntarily abandon the land in question, see 513 F.2d at 1390, and affirmed that the actions of private individuals cannot affect aboriginal title, see 513 F.2d at 1387 ("[T]ermination of Indian title is exclusively the province of the United States."). The Court of Claims held that there must be "clear and convincing evidence of an intent

to extinguish" aboriginal title, and that "the fact that some entries [by non-Indians] were allowed in the plaintiffs' aboriginal areas is evidence of official negligence, or lack of knowledge of the plaintiffs' areas, rather than an intent on the part of the United States to abolish their whole titles." 513 F.2d at 1390. Hence, the Court of Claims in United States v. Pueblo of San Ildefonso identifies three factors that can lead to the United States gradually taking aboriginal title by implication based on Congressional action that: (i) creates an Indian reservation, (ii) authorizes non-Indian settlement on Tribal lands, and (iii) designates Tribal lands as part of a national forest reserve. See 513 F.2d at 1386. Although these factors inform the Court's extinguishment analysis, such factors do not speak to whether the Valles Caldera's private owners affected Jemez Pueblo's ability to actually and continuously use the Valles Caldera.

425. The United States also does not give weight to the fact that the Pueblos before the Court of Claims in United States v. Pueblo of San Ildefonso conceded that they no longer use their historic lands because of substantial, non-Indian interference, i.e., the question whether the Pueblos actually and continuously used the claim area was not before the Court of Claims. See United States v. Pueblo of San Ildefonso, 513 F.2d at 1385 ("The three Indian pueblos of San Ildefonso, Santo Domingo and Santa Clara filed claims with the Indian Claims Commission to recover compensation for the extinguishment of aboriginal title to their lands in northern New Mexico."). Under the Court's analysis as described above, the three Pueblos in United States v. Pueblo of San Ildefonso could have maintained their aboriginal title -- at least insofar as the actual use and occupancy requirement is concerned -- despite non-Indian occupancy and use, provided that the Pueblos did not concede the takings question and continued to actually use their historic lands, which is the factual scenario that Jemez Pueblo alleges here. See Pueblo of Jemez v. United States,

790 F.3d at 1166 ("To show 'actual' and 'continuous use,' . . . Jemez Pueblo must show, as it alleges in its Complaint, that the Jemez people have continued for hundreds of years to use the Valles Caldera for traditional purposes, including hunting, grazing of livestock, gathering of medicine and of food for subsistence, and the like.").

426. The trial establishes that the Valles Caldera's private owners significantly affected Jemez Pueblo's access to the Valles Caldera in the twentieth century. For example, upon acquiring the Valles Caldera in 1918, F. Bond insisted that Jemez Pueblo pay standard fees if Jemez Pueblo wanted to graze its livestock within the Valles Caldera and to first obtain his permission before entering those lands, which physically, spiritually, and psychology harmed Jemez Pueblo. See supra FOFs ¶¶ 207, 211-12, 215, at 95-98. In the 1920s, F. Bond altogether prohibited Jemez Pueblo from grazing cattle in the Valles Caldera. See supra FOFs ¶ 217, at 99. Bond restrictions in the 1940s forced Jemez Pueblo to conduct ceremonial retreats outside its traditional Redondo Creek and Valles Grande areas, and, by the 1950s, Bond employees were actively patrolling the Valles Caldera to discourage trespassers. See supra FOFs ¶¶ 222, 224, at 100-01. The Bonds had completely fenced the Valles Caldera's exterior boundaries by 1961, and therefore required their lessees to patrol against trespass and to ensure that the main road gates remained locked. See supra FOFs ¶¶ 226-27, at 101-02. When Dunigan acquired the Valles Caldera in 1963, he maintained and added to the existing fencing, and ordered his employees to control trespass, particularly during hunting season to ensure his commercial elk hunting operation's viability. See supra FOFs ¶¶ 228-31, at 102-03. Dunigan strictly prohibited hunting on Baca Location No. 1 without an official permit, and rumors that Dunigan employees would shoot trespassers led to a reputation among locals that the Valles Caldera was a dangerous place. See supra FOFs ¶¶ 232-33, at 103.

427. Moreover, the Valles Caldera's private owners significantly restricted Jemez Pueblo religious society's ability to access the Valles Caldera, which forced several societies, [redacted] to forego using the Valles Caldera during the twentieth century's latter half. See supra FOFs ¶¶ 254, 255, 256, 257, 259-60, at 110-13. [redacted] See supra FOFs ¶¶ 243, 247, at 105-07.

428. The trial also establishes, however, that, despite private owners' onerous restrictions, Jemez Pueblo nonetheless actually and continuously used the Valles Caldera for many traditional activities. First, the private owners' constraints were not absolute but frequently conditioned on permission that, once obtained, enabled Jemez Pueblo to engage in traditional activities such as [redacted]. See supra FOFs ¶¶ 215, 250, 250 n.101, 259, at 98, 108-09, 112. Moreover, the record includes evidence that Jemez Pueblo members repeatedly disregarded these restrictions and accessed the Valles Caldera without permission, for example, to conduct religious pilgrimages, to collect medicinal herbs, to graze cattle, and to hunt game. See supra FOFs ¶¶ 215 n.100, 253, 255, 258, at 98, 110-12. Hence, the Court concludes that Jemez Pueblo actually and continuously used the Valles Caldera during the Valles Caldera's private ownership period.

7. The United States' Valles Caldera Acquisition in 2000, and Subsequent Legislation in 2005 and 2015, Does Not Per Se Foreclose Jemez Pueblo's Aboriginal Title Claim, and Jemez Pueblo Has Actually and Continuously Used the Valles Caldera Since 2000.

429. In 2000, pursuant to the Preservation Act, the United States purchased the Dunigan family's property interests in the Valles Caldera. See Pueblo of Jemez v. United States, 790 F.3d at 1149-50 (citing Preservation Act). "[O]ne of the purposes of the [Preservation] Act was to preserve the cultural and historic value of the land . . . while avoiding interference with 'Native American religious and cultural sites.'" Pueblo of Jemez v. United States, 790 F.3d at 1172 (quoting Preservation Act). Furthermore, Congress ensured that "the management of the Preserve for all of its purposes is to be done in consultation with Indian tribes and pueblos." Pueblo of Jemez v. United States, 790 F.3d at 1172 (citing Preservation Act 16 U.S.C. § 698v-6(f)(5)). "Moreover, the warranty deed the government accepted from the Baca successors to create the Preserve specifically excepted from the warrants all prior 'claims of and demands of any Indian nation, tribe, or pueblo.'" Pueblo of Jemez v. United States, 790 F.3d at 1172 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1165 n.19).

430. The Preservation Act did not extinguish pre-existing aboriginal rights in the Valles Caldera. See Pueblo of Jemez v. United States, 790 F.3d at 1172 ("[N]owhere in the Preservation Act did Congress say it intended to extinguish aboriginal title."). Congressional intent to extinguish aboriginal Indian title must be "plain and unambiguous." Santa Fe, 314 U.S. at 346. No language in the Preservation Act expressly or impliedly removes the warranty exception for Jemez Pueblo's aboriginal title claim. Rather, Congress expressly limits the Valles Caldera's management to protect Indian use and occupancy. See Pueblo of Jemez v. United States, Oct. 25

MOO at 11, 350 F. Supp. 3d at 1062 ("Congress also recognized that 'certain features on the Baca ranch have historical and religious significance to Native Americans,' and Congress explained that those features 'can be preserved and protected through Federal acquisition of the property.'" (quoting Preservation Act)).

431. The United States citation to Chippewa Indians of Minnesota. v. United States, 305 U.S. 479 (1939), for the proposition that an aboriginal title claim cannot survive a congressional statute that provides federal land managers with complete control over federal lands is inapposite, because in Chippewa Indians of Minnesota v. United States the Supreme Court concludes that the United States extinguished the Chippewa Indian's aboriginal title through legislation establishing national forests, and because Congress "*clearly express[ed]* the intent and purpose to deprive the Tribe completely -- by the Act -- of all its remaining beneficial interest in the property." Chippewa Indians of Minn. v. United States, 305 U.S. at 482 (emphasis added). Because Congress in the Preservation Act expressed no such clear intent regarding the Valles Caldera, the Preservation Act does not, as a matter of law, preclude an aboriginal title claim. See Pueblo of Jemez v. United States, 790 F.3d at 1172-73 ("W]e are not persuaded the government is entitled to dismissal of the Jemez Pueblo's claim based on its contention that Congress' creation of the Preserve extinguished the Pueblo's aboriginal title as a matter of law.").

432. The United States cites to an amendment to the Preservation Act in 2005 that permits the United States to acquire outstanding mineral interests in the Valles Caldera. See United States' Br. at 95 (citing Preservation Act, 119 Stat. 2570 (Dec. 20, 2005)). The United States does not argue, however, the mechanism through which the 2005 amendment affects an aboriginal title claim, nor how the 2005 amendment supersedes the Preservation Act's express protections for

aboriginal use. See Pueblo of Jemez v. United States, Oct. 25 MOO at 11, 350 F. Supp. 3d at 1062. Accordingly, the Court likewise concludes that the 2005 amendment to the Preservation Act does not affect a Tribe's ability to bring an aboriginal title claim.

433. The Tenth Circuit remanded on the specific issue whether the 2015 Act, which transfers the Valles Caldera to the National Park Service, extinguished aboriginal Indian title. See Pueblo of Jemez v. United States, 790 F.3d at 1173 n.21. Notably, the Tenth Circuit framed the issue as whether the 2015 Act "*undisputably* extinguished any aboriginal title" to the Valles Caldera. Pueblo of Jemez v. United States, 790 F.3d at 1173 n.21 (emphasis added); Pueblo of Jemez v. United States, Oct. 25 MOO at 47, 350 F. Supp. 3d at 1080 (quoting Pueblo of Jemez v. United States, 790 F.3d at 1173 n.21). The 2015 Act, although repealing the Preservation Act and directing the National Park Service to manage the Valles Caldera, expressly preserved "valid existing rights." Pueblo of Jemez v. United States, 790 F.3d at 1173 n.21 (quoting 2015 Act § 3043(b)(13)(C)(13)) ("Nothing in this section affects valid existing rights."). Furthermore, in the 2015 Act, Congress does not treat the Valles Caldera as a general National Park Service unit, but rather includes provisions that expressly protect aboriginal use and occupancy, and requires the Valles Caldera's managers to consult with interested Tribes and Pueblos. See 2015 Act § 3043(b)(3)(C)(iii)(III) (requiring consultation with "Indian tribes and pueblos, including the Pueblos of Jemez, Santa Clara, and San Ildefonso."); 2015 Act § 3043(b)(10) (prohibiting motorized access and construction of roads and buildings above 9,600 feet in elevation, or 250 feet below fifteen summits, to protect Tribal cultural, religious and archaeological resources); 2015 Act § 3043(b)(11) (providing for the protection of Pueblo "Traditional Cultural and Religious Sites," and requiring Valles Caldera managers to provide access to "members of Indian tribes or

pueblos for traditional cultural and customary uses"). Rather than satisfying the Court's standard for plain and unambiguous evidence to extinguish aboriginal title when Congress designates lands for federal use, namely "unilateral actions [that] placed restrictions on the Pueblos' historic use of their land, that is, [that] prevented the Indians from using the land how they saw fit," the 2015 Act restricts the United States' land use, and protects Tribes and Pueblo's ability to use the Valles Caldera according to their cultural traditions. Pueblo of Jemez v. United States, 350 F. Supp. 3d at 1119. The Court therefore concludes that the 2015 Act neither extinguishes aboriginal title nor otherwise precludes an aboriginal title claim.

434. The trial establishes that Jemez Pueblo has actually and continuously used the Valles Caldera since 2000. See supra FOFs ¶¶ 431-524, at 205-31. For example, within the Valles Caldera, Jemez Pueblo uses [redacted] See supra FOFs ¶¶ 431, 433, 439, 463-65, at 205-06, 208, 213. [redacted] See supra FOFs ¶¶ 434-35, at 207. [redacted] See supra FOFs ¶¶ 436-37, at 207. Jemez Pueblo members [redacted]

[redacted] See supra FOFs ¶¶ 440-41, 482-83, 499-500, 506, 508, 515-16, 524, at 208, 221, 225-27, 229, 231. [redacted] See supra FOFs ¶¶ 442-44, 522, at 209, 247. Moreover, [redacted] See supra FOFs ¶¶ 462, 465-69, 472, 485-87, 491-94, 496, 501-02, 521, 523-24, at 212-15, 222-26, 230-31.

435. Jemez Pueblo works closely with Valles Caldera staff to facilitate its ability to actually and continuously use the Valles Caldera, and both the Valles Caldera Trust and the National Park Service have recognized Jemez Pueblo's continuous Redondo Peak use and have incorporated such use into their respective resource management practices. See supra FOFs ¶ 474, at 216. For example, Jemez Pueblo has made at least thirteen requests to access Redondo Peak for pilgrimages and other ceremonial activities, which Valles Caldera staff typically grant, and, when non-Indians request access to Redondo Peak, the National Park Service attempts to determine if the request will conflict with a scheduled Jemez Pueblo activity, and, should conflict exists, Valles Caldera staff requests that the non-Indian either choose another day or forego activity that might disturb Jemez Pueblo's Redondo Peak use. See supra FOFs ¶¶ 475-77, at 217-19. Moreover, on at least one occasion, Valles Caldera staff discussed having a Jemez Pueblo member accompany

non-Indian researchers to Redondo Peak's summit. See supra FOFs ¶ 476, at 217-18. The Valles Caldera Trust and the National Park Service have consulted with Jemez Pueblo regarding Jemez Pueblo's architectural and archaeological interests in the Banco Bonito, La Jara Creek, and Upper Jaramillo Creek, and, on at least one occasion, conducted a field visit with Jemez Pueblo to inspect proposed sites for a scientific device. See supra FOFs ¶¶ 484, 514, at 221-22, 228-29. Such consultations further evince to the Court Jemez Pueblo's sincere, longstanding relationship with the Valles Caldera.

436. The Court notes that Jemez Pueblo's Valles Caldera use dramatically increased after the United States' purchase in 2000. See supra FOFs ¶ 477 n.157, at 218-20. The United States argues such an increase is not probative whether Jemez Pueblo possessed aboriginal title before 2000, because it represents merely an attempt to manufacture evidence to support Jemez Pueblo's aboriginal title claim, and, therefore, deserves little, if any, weight. See United States' Br. at 80 (citing Coletti v. Cudd Pressure Control, 165 F.3d at 775 (advising that, similar to the adverse inference attendant to evidence spoliation, one can draw an adverse inference from the "fraudulent creation of evidence")). Although the Court agrees with the United States that Jemez Pueblo has adopted policies aimed, in part, at increasing and documenting its Valles Caldera use to support its aboriginal title claim, such behavior is nonetheless based on a sincerely held belief in and connection to the Valles Caldera as Jemez Pueblo's traditional aboriginal homeland for many centuries. The resolutions that Jemez Pueblo obtained from other American Indian entities further evidence Jemez Pueblo's enduring relationship to these lands. See supra FOFs ¶¶ 535-66, at 238-252. Moreover, given that Jemez Pueblo has for at least the past twenty years petitioned the United States for the right to acquire the Valles Caldera, see supra FOFs ¶¶ 324-26, 328, at

142-145, the Court is neither surprised that Jemez Pueblo's Valles Caldera use increased once the United States made those lands accessible to Pueblos and Tribes, nor that Jemez Pueblo thoroughly documented such use while considering whether to pursue a QTA action. Hence, although the Court agrees with the United States' assertion that Jemez Pueblo cannot establish aboriginal title to the Valles Caldera based on use that occurred after 2000, such use is relevant support for the Court's conclusion that Jemez Pueblo actually and continuously used the Valles Caldera through the alleged interference date.

B. JEMEZ PUEBLO'S VALLES CALDERA USE WAS NOT EXCLUSIVE.

437. Evidence presented at trial disproves Jemez Pueblo's claim that it was the Valles Caldera's exclusive aboriginal user. Moreover, Jemez Pueblo's non-exclusive Valles Caldera use does not fit within a recognized exception to aboriginal title's exclusive-use requirement. Jemez Pueblo, therefore, cannot satisfy the burden of proof necessary to establish aboriginal title to the Valles Caldera.

1. Many Pueblos and Tribes Historically Used and Continue to Use the Valles Caldera.

438. In addition to showing actual and continuous use for a long time, Jemez Pueblo must also prove that it had "exclusive" use and occupancy of the Valles Caldera. Pueblo of Jemez v. United States, Oct. 25 MOO at 74, 350 F. Supp. 3d at 1094 (citing Santa Fe, 314 U.S. at 345 ("If . . . the lands in question . . . were included in[] the ancestral home of the Walapais in the sense that they constituted definable territory occupied exclusively by the Walapais (as distinguished from lands wandered over by many tribes), then the Walapais had 'Indian title.'" (quoting Buttz v. N. Pac. R.R. Co., 119 U.S. at 66)). To carry this burden, the Tribe must show that it "used and

occupied the land to the exclusion of other Indian Groups." Pueblo of Jemez v. United States, 790 F.3d at 1165-66 (quoting United States v. Pueblo of San Ildefonso, 513 F.2d at 1394). The Tenth Circuits' full comments and corresponding support are particularly insightful:

> The government contends the Jemez Pueblo cannot prove "exclusive" use because the Baca heirs used the land. But the "exclusive" part of the test meant only that in order to establish aboriginal title, a tribe "must show that it used and occupied the land to the *exclusion of other Indian groups.*" *Pueblo of San Ildefonso*, 513 F.2d at 1394 (emphasis added); *see also Native Village of Eyak*, 688 F.3d at 624 ("Exclusivity is established when a tribe or a group shows that it used and occupied the land to the *exclusion of other Indian groups.*"); *Zuni Tribe of N.M. v. United States*, 12 Cl.Ct. 607, 608-09, 617-20 & nn. 13-15 (1987) (holding Zuni exclusively used and occupied lands where no evidence other tribes used and occupied lands); *Wichita Indian Tribe v. United States*, 696 F.2d 1378, 1385 (Fed. Cir. 1983) ("Clearly, the northern two-thirds of Oklahoma where the Osage also hunted cannot have been used exclusively by the Wichitas. Lands continuously wandered over by adverse tribes cannot be claimed by any one of those tribes."); *Caddo Tribe of Okla. v. United States*, 35 Ind. Cl. Comm. 321, 358-60 (1975)(exclusivity established where Tribe "exercised control over [the claimed area] and over other Indians who may have ventured therein").

Pueblo of Jemez v. United States, 790 F.3d at 1165-66. The caselaw therefore makes clear that Jemez Pueblo must have exercised dominion and control sufficient to expel intruders. See Santa Fe, 314 U.S. at 345; Pueblo of Jemez v. United States, 790 F.3d at 1166. In United States v. Pueblo of San Ildefonso, the Court of Claims further describes this requirement:

> Implicit in the concept of ownership of property is the right to exclude others. Generally speaking, a true owner of land exercises full dominion and control over it; a true owner possesses the right to expel intruders True ownership of land by a tribe is called in question where the historical record of the region indicates that it was inhabited, controlled or wandered over by many tribes or groups. Ordinarily, where two or more tribes inhabit an area no tribe will satisfy the requirement of showing such "exclusive" use.

United States v. Pueblo of San Ildefonso, 513 F.2d at 1394. See Strong v. United States, 518 F.2d at 561 ("One of the primary characteristics of ownership is the desire and ability to exclude others from the area over which ownership is claimed.").

439. The ability to exercise dominion and control considers a Tribe's power to expel outsiders, and, "where there is no evidence that the tribes exercised full dominion and control of the claimed area," such power is a function of population. Native Vill. of Eyak v. Blank, 688 F.3d at 624-25 (concluding that five Alaskan Native Villages' combined population, "between 400 and 1500," was "low" and "incapable of controlling any part of the [the claim area]"); Osage Nation of Indians v. United States, 19 Ind. Cl. Comm. 481, 490 (1968)(concluding that the Osage Nation lacked exclusive control given their low population and evidence suggesting that other parties used the land). Moreover, Jemez Pueblo cannot satisfy exclusive use merely through being "predominant in [a] region" that other Tribes or Pueblos also used. Strong v. United States, 31 Ind. Cl. Comm. at 204. See Strong v. United States, 518 F.2d at 565 ("It is clear that the Commission, after finding that the two tribes in question enjoyed 'predominance' over certain portions of [the claim area], restricted the determination of aboriginal title to that limited area of land over which the tribes in question enjoyed exclusive occupancy and control.").

440. Conversely, to defeat Jemez Pueblo's exclusivity claim, the United States' "[e]vidence of use and occupancy by other groups 'must be specific.'" Native Vill. of Eyak v. Blank, 688 F.3d at 628 (quoting Alabama-Coushatta Tribe of Texas v. United States, No. 3-83, 2000 WL 1013532, at *17 (Fed. Cl. June 19, 2000)). See Wichita Indian Tribe v. United States, 696 F.2d 1378, 1385 (Fed. Cir. 1983). In Wichita Indian Tribe v. United States, the United States Court of Appeals for the Federal Circuit rejected the United States' argument that other Indian

tribes interfered with the Wichita Indian Tribe's exclusive use and occupancy of a claim area in Texas, because "the evidence supporting mutual use of this land [was] not specific enough to justify a finding of a lack of exclusive use of all the Texas lands, especially given the Wichitas' role as traders and their friendly relationship with these tribes." Wichita Indian Tribe v. United States, 696 F.2d at 1385. See Alabama-Coushatta Tribe of Texas v. United States, No. 3-83, 2000 WL 1013532, at *17 (concluding that a hearing officer's finding -- that other Tribes' presence in the claim area precluded the claimant Tribe's ability to establish exclusive use -- was clearly erroneous, because the record contained "no probative evidence" that the other Tribes "occupied or used" the claim area)); Spokane Tribe of Indians v. United States, 163 Ct. Cl. at 64 n.5 ("[S]cattered observations that other Indians were at one or another time found at one or another spot [inside the claim area] cannot be given any substantial weight. These casual observations do not indicate whether the alien Indians were there as visitors, on a temporary basis, etc.").

441. Archeological evidence presented at the trial establishes that, for many hundreds of years, ancestors of the modern Keres and Tewa Pueblos, which includes the modern Pueblos of Acoma, Chochiti, Laguna, Nambe, Ohkay Owingeh, Pojoaque, San Felipe, San Ildefonso, Santa Ana, Santa Clara, Santo Domingo, Tesuque, and Zia, densely occupied the Jemez Mountains' eastern slopes, including the major drainages that served as paths into the Valles Caldera. See supra FOFs ¶¶ 52-58, 61, 71, at 25-33, 39. Since the 1200s, large populations of ancestral Keres, Tewa, and Navajo Nation members in the area surrounding the Valles Caldera used their trails to access the Valles Caldera in a manner virtually indistinguishable from Jemez Pueblo, that is, to hunt, to gather plants, to collect obsidian, and to conduct other traditional practices. See supra FOFs ¶¶ 56, 58, 60, 72, 73, 74, 110, 111, 112, at 28-30, 32-33, 39-43, 58-59. Significantly, Santa

Clara Pueblo has for centuries lived next to the Valles Caldera, and two large, ancestral Santa Clara Pueblo villages totaling approximately 3,200 rooms are located in Santa Clara canyon, a few miles from the Valles Caldera's northeast border. See supra FOFs ¶ 62, at 35.

442. The trial establishes that ancestral Keres and Tewa peoples would bring pottery with them on at least some trips to the Valles Caldera, and broken pottery fragments found throughout those lands prove that ancestral Keres and Tewa members actually and continuous used the Valles Caldera from at least 1250 C.E. through at least 1750 C.E. See supra FOFs ¶¶ 75, 76, 77, 79-81, 83-84, 85, 87, 88, at 43-49. Sites that archeologists affiliate with ancestral Tewa and Keres populations -- including the Valles Caldera's most robust ceramics evidence, which archeologists excavated at [redacted] -- are the most common sites in the Valles Caldera's southeast and south central areas, i.e., the areas closest to ancestral Keres and Tewa villages. See supra FOFs ¶ 89, at 49. The ceramics record also demonstrates that ancestral Tewa and Keres peoples used the Valles Caldera's northern portions. See supra FOFs ¶ 91, at 50. The pre-Pueblo Revolt Tewa and Keres ceramics found at [redacted] are especially probative of Tewa and Keres' Valles Caldera use, because Tewa and Jemez peoples did not trade pottery, or any goods, before the Pueblo Revolt, and trade between ancestral Jemez and other Tribes was so infrequent before the Pueblo Revolt that it accounted for less than three percent of pottery found at Jemez Pueblo sites. See supra FOFs ¶¶ 89, 90, at 49-50. Accordingly, although many groups, including ancestral Jemez Pueblo, may have used [redacted], the Court concludes that the site is predominantly Tewa. Even within the Banco Bonito, where Jemez Pueblo pottery dominates, archeologists have discovered Tewa pottery in substantial quantities, and the record also contains evidence that multiple Zia Pueblo religious societies would traverse the Banco Bonito while

pilgrimaging to numerous locations throughout the Valles Caldera, including Redondo Peak and [redacted]. See supra FOFs ¶¶ 69, 73, 86, at 38-40, 48. The Court concludes that, because the predominant ceramics evidence found throughout the Valles Caldera has an ancestral Tewa and Keres affiliation, Tribes other than Jemez Pueblo actually and continuously used those lands for a long time.

443. The trial similarly establishes that many Pueblos and Tribes used the Valles Caldera's obsidian resources. American Indians collected obsidian from the Jemez Mountains, including the Cerro del Medio source located entirely within the Valles Caldera, from before 10,000 B.C.E. to at least 1900 C.E. See supra FOFs ¶¶ 92-95, at 50-52. Multiple groups directly obtained obsidian directly from Cerro del Medio or traded with non-Jemez Pueblos to obtain the obsidian, from between 1300 and 1700. See supra FOFs ¶¶ 96, 100-03, at 52, 54-55. The large, non-Jemez Pueblos of Gran Quivira, Pueblo Blanco, and Pueblo Colorado, approximately 100 miles from the Valles Caldera, used Cerro del Medio obsidian in percentages higher than or comparable to contemporaneous Jemez Pueblos. See supra FOFs ¶ 106, at 56-57. These Pueblos did not obtain their Cerro del Medio obsidian from Jemez Pueblo. See supra FOFs ¶ 106, at X. Moreover, the 2,000-room Pueblo of San Marcos, located dozens of miles to the Valles Caldera's southeast, similarly either collected obsidian directly from Cerro del Medio, or obtained it through trade with Keres or Tewa Pueblos from the 1400s through the Pueblo Revolt. See supra FOFs ¶ 106, at 56-57. The evidence establishes that many of the Tewa and Keres sites included in studies conducted at Los Alamos National Labs and Bandelier National Monument on the Valles Caldera's east and southeast sides indicate that Keres and Tewa sites used Cerro del Medio obsidian at a percentage comparable to Jemez Pueblo. See supra FOFs ¶ 106, at 56-57. In short,

Pueblos other than Jemez Pueblo traveled to Cerro del Medio to obtain obsidian from at least 1300 to 1700 C.E. The record regarding obsidian use therefore proves that many Pueblo and Tribes were actually and continuously using the Valles Caldera to obtain obsidian from before to 1300 C.E. through the twentieth century.

444. Studies of tree-ring fire scars prove that ancestral Pueblo peoples intensively used and occupied the Jemez Mountains without any community controlling lands near the Valles Caldera. See supra FOFs ¶ 111, 111 n.52 at 58. Moreover, carvings on the Valles Caldera's aspens suggest that individuals associated with numerous non-Jemez Pueblo communities, including six other Pueblos, used the Valles Caldera between the 1890s and the 1980s. See supra FOFs ¶¶ 113-14, at 59-60. Taken together, the archaeological record disproves Jemez Pueblo's claim that it was the Valles Caldera's exclusive user. Such evidence proves instead that, for many centuries, non-Jemez Pueblo American Indians, including the ancestors of numerous modern Pueblos and federally recognized Tribes, wandered throughout and actually used the Valles Caldera used the Valles Caldera to sustain their aboriginal communities in ways substantially similar to Jemez Pueblo. Absent an exception to the exclusive-use requirement, such use defeats Jemez Pueblo's aboriginal title claim.

2. Jemez Pueblo's Valles Caldera Use Does Not Fit Within the Three Exceptions to the Exclusivity Requirement.

445. The ICC, which possessed broad jurisdiction over legal, equitable, and moral claims, created three exceptions to aboriginal title's exclusive-use requirement. See Navajo Tribe of Indians v. State of N.M., 809 F.2d at 1464-66 (concluding that the ICCA gave the ICC "sweeping" authority to consider "all possible accrued claims" against the United States, including

claims "of a purely moral nature"); Pueblo of Jemez v. United States, Oct. 25 MOO at 82, 350 F. Supp. 3d at 1098 (discussing the three exceptions to the exclusive use requirement). Accordingly, although Jemez Pueblo's Valles Caldera use was not exclusive, Jemez Pueblo may nonetheless establish aboriginal title to the Valles Caldera if it can show: (i) that it used the Valles Caldera jointly and amicably with other Tribes; (ii) that it dominated or could have dominated the other Pueblos and Tribes that used the dominated use exception; or (iii) that other Pueblos and Tribes used the Valles Caldera subject to Jemez Pueblo's permission. See Pueblo of Jemez v. United States, Oct. 25 MOO at 82, 350 F. Supp. 3d at 1098. The Court concludes, however, that Jemez Pueblo's historic Valles Caldera use does not satisfy any of the three exceptions to the exclusivity requirement and that Jemez Pueblo therefore cannot establish aboriginal title to the Valles Caldera.

a. Jemez Pueblo's Valles Caldera Use Does Not Satisfy the Joint-and-Amicable Use Exception.

446. The joint-and-amicable use exception provides that "two or more tribes or groups might inhabit an area in 'joint and amicable' possession without erasing the 'exclusive' nature of their use and occupancy," and without interrupting the claimant Tribe's ability to establish aboriginal title. Strong v. United States, 518 F.2d at 561 (quoting United States v. Pueblo of San Ildefonso, 513 F.2d at 1394). "To qualify for treatment under 'joint and amicable' occupancy, the relationship of the Indian groups must be extremely close." Strong v. United States, 518 F.2d at 561. The Court of Claims described such a relationship in Sac & Fox Tribe v. United States:

> Originally the Sac and Fox Nation consisted of two separate and identifiable tribes of Indians belonging to the Algonquin stock. Around 1735, due to their mutual hostility and conflict with the French, they formed a close and intimate alliance, politically and socially, so that from thence forward they have been dealt with and referred to as a single nation both in their relationship with other Indian tribes and in treaty negotiations and other matters with the United States.

315 F.2d at 995.

447. Although the joint possessors must show their relationship is a "close and intimate alliance, politically and socially," Strong v. United States, 518 F.2d at 562, it is not necessary for the Tribes to show that they are completely merged, see United States v. Pueblo of San Ildefonso, 513 F.2d at 1395 ("There are no holdings of this court which say that two Indian tribes or groups, each a separate 'entity' and each with its own separate lands, can never assert joint ownership to other lands which are commonly used and occupied."). For example, the evidence in United States v. Pueblo of San Ildefonso showed that two Indian groups objectively believed that they shared common ownership of the land "in joint tenancy under a 1770 land grant from the Spanish Crown," and the Court of Claims held that the Tribes used and occupied the land in joint-and-amicable possession. See United States v. Pueblo of San Ildefonso, 513 F.2d at 1395-96.

448. The joint-and-amicable use exception does not apply, however, when "each tribe had separate lands, [and] there was no community of interest in the lands," because

> [t]he [Tribes] did not consider themselves, and were not treated, as a single or closely integrated entity, but rather as separate political groups which were friends or allies (for the most part). Their use of the same lands may have been in common, like much of Indian use of the midwestern and western regions -- but the Commission could properly decide that it was not proved to be truly joint, and therefore that each separate tribe's claim to Indian title would have to be tested on its own distinct basis.

Strong v. United States, 518 F.2d at 562. Thus, mere cooperation among two or more Tribes is insufficient to prove joint-and-amicable possession. See Strong v. United States, 518 F.2d at 562.

449. The record contains no evidence that Jemez Pueblo jointly and amicably used and occupied the Valles Caldera with any other Pueblo or Tribe. Far from sharing political and social

alliances, Jemez Pueblo, and the Keres and Tewa Pueblos that surround the Valles Caldera, had and continue to maintain distinct cultural traditions and languages that are not mutually intelligible. See supra FOFs ¶¶ 42-44, 75, at 15-17, 43. Although Jemez Pueblo directs the Court to caselaw which, according to Jemez Pueblo, supports its assertion that it satisfies the exclusivity requirement through the joint-and-amicable use exception, it does not attempt to connect the evidence to that caselaw. See Jemez Pueblo's Proposed Conclusions ¶¶ 67-71, at 43-45. Jemez Pueblo elsewhere argues that Cochiti Pueblo member Joseph Suina and Taos Pueblo member Gilbert Suazo's testimony affirming the existence of "longstanding agreements and relationships among the pueblos" is sufficient to constitute joint-and-amicable use evidence. Jemez Pueblo's Proposed Findings ¶¶ 56, 59, at 22, 24. The Court notes, however, not only that such testimony is too vague to support joint-and-amicable use, but also [redacted] see supra FOFs ¶ 535 n.170, at 238, evincing discord among the two Pueblos, and that Taos Pueblo's representative was unable to provide any information regarding Tao Pueblo's, or any Pueblo's, Valles Caldera use, see supra FOFs ¶ 551 n.176, at 246.

450. At least fifteen Pueblos and Tribes used and occupied the Valles Caldera at various times throughout history, and the Court is unpersuaded, absent specific evidence or argument, that so many diverse groups occupied those lands in joint-and-amicable accord. See supra FOFs ¶¶ 56, 58, 60, 72, 73, 74, 110, 111, 112, at 28-32, 39-41, 58-59. To the contrary, the record is replete with evidence that, until the Pueblo Revolt, Jemez Pueblo was so isolated from the Valles Caldera's other aboriginal users as not to engage in any significant trade, and, thereafter, was involved in violent conflict with, at a minimum, San Ildefonso Pueblo, Santa Clara Pueblo, the Jicarilla Apache Nation, the Navajo Nation, and the Ute Tribe. See supra FOFs ¶¶ 89, 90, 165,

173-74, 176, 182, 184, at 49, 84-85, 87-90. Such evidence indicates that Jemez Pueblo enjoyed no alliance -- political, social, or otherwise -- with the Valles Caldera's numerous aboriginal users, and the Court therefore concludes that Jemez Pueblo cannot benefit from the joint-and-amicable use exception to the exclusive use requirement.

b. Jemez Pueblo's Valles Caldera Use Does Not Satisfy the Dominant Use Exception.

451. The dominate use exception to the exclusive use rule recognizes that, where another Tribe commonly uses the land with the claimant Tribe, proof of the claimant Tribe's dominance over the other Tribe preserves its exclusive use of the claim area. See United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383-86. The claimant Tribe's dominance illustrates its ability to exclude other Tribes from the area, even if it never chooses to exercise that ability. See United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383. In United States v. Seminole Indians of Florida, for example, the Court of Claims explained that the Seminole Indians obtained aboriginal title to the Florida peninsula, notwithstanding the presence of other Indian tribes, because there was

> little question that, in their occupation of the land, the Seminoles held a virtual "monopoly." While expert witnesses concede the contemporaneous existence of other Indians in Florida . . . these scattered groupings were few and far between, and the record offers no evidence to suggest that Seminole dominion was ever challenged by these vestiges of aboriginal cultures. Instead, the pattern that prevailed was one of cultural assimilation -- the Seminoles simply absorbing these "foreign" elements into their own ranks.

United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383. Thus, the dominant use exception prevails in situations where one Tribe culturally assimilates another Tribe or otherwise exercises complete dominion over "scattered groupings" of other Indians that appear "few and far between."

United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383. Accordingly, to satisfy the exclusive use requirement under the dominant use exception, Jemez Pueblo must prove that it dominated, or could have dominated, each of the Pueblos and Tribes that used the Valles Caldera during the relevant historical period.

452. The trial establishes that Jemez Pueblo did not dominate the large, ancestral Keres, Tewa, Navajo Nation, and other ancestral American Indian groups that surrounded the Valles Caldera, and accessed those lands to hunt, to gather plants, to collect obsidian, and to conduct other traditional practices beginning in the thirteenth century. Rather than proving Jemez Pueblo's control, the record instead establishes that Jemez Pueblo and ancestral Tewa Tribes, including Santa Clara Pueblo and San Ildefonso Pueblo, used the Valles Caldera at a time when they lacked the requisite amicability even to engage in trade. See supra FOFs ¶ 81 n.41, at 46-47. Moreover, although ancestral Tewa peoples and Jemez Pueblo engaged in some trade following the Pueblo Revolt, by 1863, relations between Santa Clara Pueblo and Jemez Pueblo were sufficiently hostile for the Santa Clara Pueblo leader who participated in capturing Jemez Pueblo members between the Valle Grande and Walatowa to equate Jemez Pueblo with Navajo Nation members who stole Santa Clara Pueblo's livestock. See supra FOFs ¶¶ 81 n.41, 89, 90, 182-84, at 46-47, 49-50, 89-90. Such evidence proves that Jemez Pueblo and Santa Clara Pueblo were averse to each other, and therefore unlikely to respect each other's demands, during periods when both Pueblos actually used the Valles Caldera.

453. The obsidian record also evinces that Jemez Pueblo did not dominate the Tribes that used Valles Caldera. As stated above, many non-Jemez Pueblos obtained obsidian from the Valles Caldera, and the record contains no evidence that Jemez Pueblo ever controlled access to

the Cerro del Medio quarry, which is the only obsidian source that lies entirely within the Valles Caldera's borders. See supra FOFs ¶¶ 94-96, 100-03, at 52, 54-55. Moreover, Jemez Pueblo's focus on the percentage of Cerro del Medio obsidian at Jemez Pueblo-affiliated archeological sites is insufficient to establish dominance, first, because non-Jemez Pueblo affiliated sites suggest Cerro del Medio obsidian use at rates comparable to Jemez Pueblo and, second, because Jemez Pueblo does not suggest that it had a greater population size, and, thus, greater obsidian use in the aggregate than the other Pueblos that used Cerro del Medio obsidian. See supra FOFs ¶ 106, at 56-57. Hence, the obsidian record is insufficient to establish that Jemez Pueblo controlled or dominated the Valles Caldera's other aboriginal users access to those lands.

454. The trial establishes that most Pueblos could access the Valles Caldera without passing through Jemez Pueblo. Moreover, Zia Pueblo's multiple routes across the Valles Caldera evince particular independence from Jemez Pueblo, because Zia Pueblo's religious societies would use them both to reach [redacted] and to reach Redondo Peak, and because, during the Coronado Expedition in 1541 C.E., Zia Pueblo advised Captain Francisco Barrionuevo regarding an agreeable, southern route through the Valle Grande that was geographically separate from any route that Jemez Pueblo would have taken during that period. See supra FOFs ¶¶ 56, 307, 374-77, at 28, 134, 174-77. Zia Pueblo also attaches great spiritual significant to the Jemez River tributaries that begin in the Valles Caldera and to [redacted], access to which requires Zia Pueblo members to pass through Jemez Pueblo's alleged exclusive-use territory in the Banco Bonito. See supra FOFs ¶¶ 380-81, at 178-79. Moreover, Zia Pueblo accessed the Valles Caldera pursuant to its own seven-month religious

calendar, i.e., without considering Jemez Pueblo's will regarding such access and use. See supra FOFs ¶ 405, at 190.

455. The Court finds unpersuasive Jemez Pueblo's argument that theoretical travel time to Redondo Peak evinces Jemez Pueblo's dominance over the Valles Caldera, because this conclusion does not consider that Pueblos other than Jemez Pueblo were much closer than Jemez Pueblo to other points within the Valles Caldera. See supra FOFs ¶¶ 74, 74 n.38, at 40-42. Evidence regarding which Pueblo could more easily access areas within the Valles Caldera does not speak to the legal standard for the dominate-use exception, which requires the claimant Tribe to prove that it exerted dominance over the claim area's other aboriginal users and not that the claimant Tribe merely used the claim area more than other Tribes. See Strong v. United States, 518 F.2d at 565 ("It is clear that the Commission, after finding that the two tribes in question enjoyed 'predominance' over certain portions of [the claim area], restricted the determination of aboriginal title to that limited area of land over which the tribes in question enjoyed exclusive occupancy and control.").

456. Jemez Pueblo's ninety place names within the Valles Caldera also do not affect the Court's analysis under the dominate use exception, as these names do not inform the Court whether Jemez Pueblo controlled other Tribe's access to or use of the areas that the names describe. See supra FOFs ¶¶ 59 n.26, 376 n.140, at 30-32, 176-77. Many Pueblos and Tribes also have place names for sacred areas within the Valles Caldera. See supra FOFs ¶¶ 307, 358, 376, 410, 417, 432, at 134, 167, 176-77, 191-92, 196, 205-06. The Court concludes, therefore, that Jemez Pueblo's focus on place names as a proxy for exclusive use cannot overcome the evidence which proves that other Pueblos and Tribes actually used those lands as well.

457. The Court concludes that Jemez Pueblo's population during the relevant period, which the Court considers given that the record does not include evidence that Jemez Pueblo actually dominated the Pueblos and Tribes that used the Valles Caldera, was too small to expel or otherwise affect the Valles Caldera's other aboriginal users. See Native Vill. of Eyak v. Blank, 688 F.3d at 624-25 (concluding that the ability to exercise dominion and control is a function of population "where there is no evidence that the tribes exercised full dominion and control of the claimed area"). The trial establishes that, beginning in the early 1600s, disease and warfare with the Spanish significantly reduced Jemez Pueblo's population such that, by 1744, there were only between 100 and 200 total Jemez Pueblo members, all of whom lived in Walatowa, over twenty miles from Redondo Peak. See supra FOFs ¶¶ 156, 161, at 81, 82-83. Moreover, although Jemez Pueblo's population gradually increased after 1744, it remained under 1,000 individuals through at least the nineteenth century. See supra FOFs ¶¶ 157-58, at 81-82. During the same period, the Navajo, Jicarilla, and Ute, each of which used the Valles Caldera and was averse to Jemez Pueblo, were larger and more militarily capable than Jemez Pueblo, and, among the Pueblos not openly hostile to Jemez Pueblo, Zia Pueblo at least had a population size greater than Jemez Pueblo, which suggests that Jemez Pueblo could neither defend the Valles Caldera from nor exert its will over these groups. See supra FOFs ¶¶ 159-64, 166, at 82-85.

458. The record contains two instances wherein Jemez Pueblo members attacked and defeated Navajo Nation members during the 1800s; however, these events do not establish Jemez Pueblo's dominance over the Navajo Nation, because, first, the record also includes two accounts wherein Navajo Nation members drove Jemez Pueblo members from the Valles Caldera, evidencing that the two groups enjoyed at least equal footing within those lands, and, second, the

record also contains evidence that Navajo Nation members worshipped on Redondo Peak, which Jemez Pueblo would not have permitted given that mountain's sacredness to Jemez Pueblo. See supra FOFs ¶¶ 44, 168, 174, 176, 535 n.170, at 16-17, 85, 87, 238. Therefore, even if the Court considers the Navajo Nation's presence in and use of the Valles Caldera as "scattered" and "few and far between" -- which the Court does not -- Jemez Pueblo has not shown that it had "complete dominion" over the Navajo Nation. United States v. Seminole Indians of Fla., 180 Ct. Cl. at 383.

459. Moreover, Jemez Pueblo does not argue that it expelled from the Valles Caldera members of the Jicarilla Apache, the Ute Tribe, Santa Clara Pueblo, or San Ildefonso Pueblo, all of whom use those lands and were at times averse to Jemez Pueblo. See supra FOFs ¶¶ 159-64, 166, at 82-85. Significantly, on at least one occasion, members of Santa Clara Pueblo, San Ildefonso Pueblo, and the Ute Tribe imposed their will on Jemez Pueblo, and compelled Jemez Pueblo members to comply with their demands. See supra FOFs ¶¶ 182-84, at 89-90. That other Pueblos and Tribes had the freedom to attack repeatedly Jemez Pueblo and third parties within the Valles Caldera further supports the Court's conclusion that no single Pueblo or Tribe dominated those lands.

c. Jemez Pueblo's Valles Caldera Use Does Not Satisfy the Permissive Use Exception.

460. The permissive use exception to the exclusive use rule acknowledges that other Indian Tribes could have "rang[ed] over large portions" of the claimant Tribe's land without defeating the exclusive nature of the claimant Tribe's use, provided that the other Tribes' presence was with the claimant Tribe's permission. Wichita Indian Tribe v. United States, 696 F.2d at 1385. The Federal Circuit in Wichita Indian Tribe v. United States explained that, in light of the other

Tribes' friendly relations and trading activities, it required more specific evidence than that of shared hunting grounds to "justify a finding of a lack of exclusive use of all the Texas lands." 696 F.2d at 1385. Similarly, in Spokane Tribe of Indians v. United States, the Court of Claims admonished the ICC to "adequately consider whether [the] use by other Indians was by permission and at the sufferance of the [claimant Tribe], or as a matter of right; if the former, the alien visits would not diminish the appellant's Indian title." Spokane Tribe of Indians v. United States, 163 Ct. Cl. at 68-69. In Strong v. United States, the Court of Claims affirmed the ICC's finding that the claimant Tribe's presence was "overwhelmingly predominant and lasted a long time. Those incidents of use and occupancy by other Indians [the court views] as permissive or as so sporadic as not to be inconsistent with [the claimant Tribe's] use and occupancy." Strong v. United States, 518 F.2d at 565.

461. To satisfy the permissive use exception, permission need not be explicit, but may be inferred from the record as a whole. See Strong v. United States, 518 F.2d at 572. The Court of Claims in Strong v. United States found that a Tribe other than the claimant Tribe had two settlements in the claim area and inferred permissive use, stating that

> [t]here is evidence that the Wyandot had given permission to other Indian tribes to use their lands in Ohio, and we think the record, taken as a whole, supports the inference that the Ottawa were in the Sandusky area with the consent of the Wyandot. Permissive use by the Ottawa did not diminish the title of the Wyandot, and by the same token, such use gave the Ottawa no interest in the land.

Strong v. United States, 518 F.2d at 572.

462. The record contains no evidence that other Tribes -- either historically or in modern times -- have asked Jemez Pueblo's permission to enter the Valles Caldera. The Court notes that a practice among Pueblos is to seek permission before entering lands that one Pueblo views as

another Pueblo's exclusive aboriginal domain, and the record includes evidence that other Pueblos ask Jemez Pueblo's permission to enter Jemez Pueblo's Tribal trust lands, yet the record is silent regarding any Tribe requesting from another Tribe permission to access and use the Valles Caldera. See supra FOFs ¶¶ 74, 74 n.36, at 40-42. Moreover, representatives from the Pueblos of Cochiti and Santa Clara testified at trial that their respective Pueblos do not request permission from Jemez Pueblo before using the Valles Caldera, which is in accord with the Eight Northern Pueblos Council's 2001 resolution asserting that, without referencing permission from Jemez Pueblo, multiple Pueblos have used the Valles Caldera since time immemorial. See supra FOFs ¶¶ 361, 410 n.145, 527, at 68-69, 91-92, 232. Moreover, the resolutions that Jemez Pueblo obtained from other Tribes during this litigation's pendency evidence only Jemez Pueblo's acute connection to the Valles Caldera; they are insufficient to establish that the Pueblos referenced therein have requested Jemez Pueblo's permission to use those lands since time immemorial. See supra FOFs ¶¶ 361, 410 n.145, 527, at 68-69, 91-92, 232. The Court concludes therefore that no evidence supports Jemez Pueblo's assertion that the Valles Caldera's aboriginal occupants used those lands subject to Jemez Pueblo's permission.

463. The record also does not support an inference that other Pueblos' Valles Caldera use was subject to Jemez Pueblo's permission, because such use was deliberate, longstanding and substantial, that is, not sporadic or to facilitate trade. See Wichita Indian Tribe v. United States, 696 F.2d at 1385; Strong v. United States, 518 F.2d at 565. As stated above, numerous Pueblos and Tribes used the Valles Caldera to hunt, to gather plants, to collect obsidian, and to conduct other traditional practices in the centuries before trade occurred, i.e., during a period when Jemez Pueblo's relationship with these groups was either nonexistent or belligerent. See supra FOFs ¶¶

56, 58, 60, 72, 73, 74, 81 n.41, 89, 90, 110, 111, 112, at 28-33, 39-41, 46, 49-50, 58-59. Moreover, Jemez Pueblo's relations with its neighbors were not universally warm in the centuries following the Pueblo Revolt, and the record evidences numerous, hostile engagements between 1680 and 1863, the most recent of which ended with Jemez Pueblo submitting to Santa Clara Pueblo, San Ildefonso Pueblo, and the Ute Tribe's authority. See supra FOFs ¶¶ 162-66, 182-84, at 83-85, 89-90. Hence, Santa Clara, San Ildefonso, Jicarilla, Navajo, and Ute members each used the Valles Caldera while adverse to Jemez Pueblo during periods spanning from 1300 C.E. through at least 1863, and use after the seventeenth century occurred when many Pueblos and Tribes outnumbered and were militarily superior to Jemez Pueblo. See supra FOFs ¶¶ 156-66, at 81-85. These adverse Tribes, at a minimum, therefore did not use the Valles Caldera subject to Jemez Pueblo's permission, which, standing alone, defeats Jemez Pueblo's ability to benefit from the permissive-use exception to the exclusive use requirement.

464. The evidence that other Pueblos and Tribes have for many years held sacred and actually used Redondo Peak for traditional, religious activity, further supports the Court's conclusion that aboriginal groups did not use the Valles Caldera subject to Jemez Pueblo's permission. The trial establishes that at least fifteen Pueblos and Tribes other than Jemez Pueblo have religious traditions which venerate Redondo Peak and include making pilgrimages to worship at shrines on that mountain, and that such use has occurred since before the Spanish colonial period and has never required these Pueblos or Tribes to pass through Jemez Pueblo villages. See supra FOFs ¶¶ 44, 47 n.16, 48 n.17, 49, 50, 61, 73, 134, 167, 244, 275, 279, 294, 299, 301-02, 304, 306, 308, 311, 315-16, 319, 370-72, 374, 376-77, 379-80, 382-85, 387-89, 391-400, 402, 406, 409, 410, 411, 526, at 16-18, 20-23, 33-35, 39, 69-70, 85, 105-06, 118-19, 129-40, 172-192, 231-32. Trial

further establishes that, despite Jemez Pueblo's admissions before the ICC that, at least during the 1950s, it used the area jointly with the Pueblos of San Ildefonso, Santa Ana, Santa Clara, and Zia, see supra FOFs ¶¶ 271-73, 275, 279, at 117-19, Jemez Pueblo nonetheless considers such use offensive, and asserts either that it does not occur or that it occurs over Jemez Pueblo's strong objections, see supra FOFs ¶¶ 384 n.140, 567 n.177, 330, 386, at 179-81. For example, when Jemez Pueblo [redacted] See supra FOFs ¶¶ 373 n.138, 385, 385 n.143, 386, 386 n.144, at 174, 181-83. That Jemez Pueblo denies and opposes other Tribe's Redondo Peak use indicates not only Jemez Pueblo's ignorance regarding other Tribes' cultural practices, but also that other Pueblos and Tribes do not use the Valles Caldera subject to Jemez Pueblo's express or implied permission.

IT IS ORDERED that: (i) Plaintiff Pueblo of Jemez does not possess aboriginal title to the lands that encompass the Valles Caldera National Preserve, and, accordingly, does not have the exclusive right to use, occupy, and possess those lands; (ii) title to the Valles Caldera National Preserve is quieted in Defendant United States of America; (iii) the case is dismissed with prejudice; and (iv) if the parties seek any attorney's fees and costs, they should proceed pursuant to D.N.M.LR-Civ. 54.

UNITED STATES DISTRICT JUDGE

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