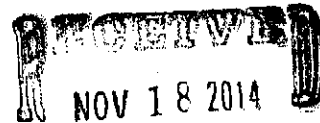


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11/14/14*

8
9 **BEFORE THE ARIZONA NAVIGABLE STREAM**
10 **ADJUDICATION COMMISSION**
11

12 In re Determination of Navigability of
13 the Gila River

No. 03-007-NAV (Gila)

**The San Carlos Apache Tribes'
"Opening "Closing Post-Hearing
Memorandum Regarding the
Navigability of the Gila River**

14 The San Carlos Apache Tribe ("Tribe" or "Apache") submits its "Opening" Closing
15 Post-Hearing Memorandum on the Navigability of the Gila River ("Gila" or "Gila River") in
16 its ordinary and natural condition on February 14, 1912, pursuant to the Court of Appeals'
17 decision in *Arizona v. Arizona Navigable Stream Adjudication Commission*, 224 Ariz. 230,
18 229 p.3d 242 (2010).

19 For reasons set forth below the Tribe requests that the Arizona Navigable Stream
20 Adjudication Commission ("ANSAC" or "Commission") find that the Gila River was not
21 navigable or susceptible to navigation as of the date of Arizona statehood, February 14, 1912.

22 **I. Introduction**

23 The Record of the Arizona Navigable Stream Adjudication Commission ("Commission" or
24 "ANSAC") contains hundreds of pages of documents and transcripts of testimony submitted
25 as evidence on the question of navigability of the Gila River on the date of Statehood,
26 February 14, 1912. ("the Evidence" or "the Record")

27 The Commission has exclusive jurisdiction to determine which, if any of the Arizona
watercourses were "navigable" on the date of Statehood. *See* A.R.S. §37-1123.

1 The Commission is required to make a finding of navigability or non-navigability for
2 each watercourse “[b]ased only on evidence of navigability or non-navigability.” and the
3 “preponderance of the evidence.” A.R.S. § 37-1123; A.R.S §37-1128(A). (“Navigability is a
4 question of fact, and the burden of proof is on the party asserting navigability”). *Mundy v.*
5 *United States* 983 F.2d 950 (1993).

6 **Burden of Proof**

7 “[T]he burden of proof rests on the party asserting navigability.” (“Proponents”) *State*
8 *of Arizona v. Arizona Navigable Stream Adjudication Comm’n*, 224 Ariz. 230, 238, 229 P.3d
9 242, 250 (Ariz. Ct. App. 2010). “Consequently the burden of proof lies with... the
10 proponents of navigability, who must prove navigability by a preponderance of the evidence.”
11 224 Ariz. at 239, 229 P.3d at 251. *See also* Arizona Revised Statutes (“A.R.S.”) § 37-
12 1128(A) (requiring that a claim of navigability be proven by a “preponderance of the
13 evidence” and placing that burden on the Proponents of navigability). Federal Law also
14 places the burden of proof on the Proponents. In *North Dakota ex rel. Bd. of Univ. & Sch.*
15 *Lands v. United States*, 972 F.2d 235, the Federal Court clearly placed the burden of proof on
16 the Proponents of navigability. (“Proponents”). Navigability for title is a question of federal
17 law. The federal test requires that the Proponents of navigability prove, by a preponderance of
18 the evidence, that at the date of statehood the Gila River was (1) used or susceptible of being
19 used, (2) as a highway of useful commerce, (3) in its ordinary and natural condition, (4) by
20 the customary modes of trade and travel. *North Dakota*, 972 F.2d at 238, *citing U.S. v. Holt*
State Bank, 270 U.S. 49, 56 (1926).

21 Additionally, the Federal Test for navigability “must be assessed at the time of
22 statehood....” *PPL Montana, LLC v. Montana*, 132 S. Ct. 1215, 1227, 1228, 1233 (2012)
23 (“*PPL Montana*”). In the case of the Gila River, the date in question is February 14, 1912.
24 The requirement that the date of statehood is the key date of inquiry, defining a “navigable
25 watercourse” as a watercourse “that was in existence on February 14, 1912, and at that time
26 was used or was susceptible to being used, in its ordinary and natural condition, as a highway
27 of commerce, over which trade or travel could have been conducted in the customary modes
of trade and travel on water. A.R.S. § 37-1101(5).

1 Evidence of isolated or sporadic attempts at navigation, standing alone, are not
2 enough to support a determination of navigability on the key date of statehood. The Supreme
3 Court stated that “[w]hile the Montana court was correct that a river need not be susceptible to
4 navigation at every point during the year, neither can that susceptibility be so brief that it is
5 not a commercial reality.” *PPL Montana* at 1234.

6 “Statutory provisions must be considered in context of entire and consideration must
7 be given to all statute’s provisions so as to arrive at legislative intent manifested by entire
8 act.” *One Hundred Eighteen Members of Blue Sky Mobile Home Owners Ass’n v. Murdock*
9 140 Ariz. 417, 682 P.2d 422 (App. Div.1 1984). When applying the Arizona Statute that
10 defines a navigable watercourse, the Commission must ensure that “no clause, sentence, or
11 word is rendered superfluous, void, contradictory or insignificant.” *State v. Superior Court*
12 *for Maricopa County* (1976) 113 Ariz. 248, 550 P.2d 626. see also *Adams v. Bolin* 74 Ariz.
13 269, 247 P.2d 617 (1952); *City of Phoenix v. Yates* 69 Ariz. 68, 208 P.2d 1147 (1959).

14 The Commission will also consider whether any segment of the Gila River was
15 navigable on February 14, 1912. In August of 2014 Jon Fuller testified on behalf of the
16 ASLD and proposed that the Commission consider the Gila River in eight (8) segments.¹

17 The San Carlos Apache Reservation ("Reservation") is located in three Arizona
18 Counties: Graham, Gila, and Pinal. The Gila River runs from the east to the west through the
19 Reservation, and is nearly co-extensive with ASLD's proposed Segments Two and Three.

20 There is little or no credible evidence to support a finding that Segments Two and
21 Three of the Gila River on the Reservation were navigable at Statehood, certainly, the
22 preponderance of the evidence does not support a finding of navigability. By far, the greater
23 weight and preponderance of the evidence indicates that the Gila River, including Segments
24 Two and Three, was not navigable at Statehood.

25 The applicable Arizona Statutes are clear that: " If the Preponderance of the evidence
26 fails to establish that the watercourse is navigable, the commission shall issue its

27 ¹ References to all transcripts in the Record will be cited as “[speaker] TR [date:page]” for example
Mr. Fuller proposed that the Commission consider the Gila River in eight (8) segments on June 16,
2014 pg 124-166 this citation is “Fuller TR 6/16/2014:124-166”

1 determination confirming that the watercourse in question is non-navigable". A.R.S. § 37-
2 1128(A)

3 The hydrology, the geomorphology and the record of the flows of the Gila River show
4 that the Gila has always been a river of extremes. Torrential and unpredictable floods have
5 been interspersed with periods of low or no flows for thousands of years.

6 The floods have scoured and redistributed the materials which have made the bed and
7 banks of the River since at least the late prehistoric period.

8 Those forces have resulted in a river with wide, shallow and braided channels which
9 were not deep enough, wide enough and did not contain water of sufficient, reliable and
10 predictable volume to support navigation.

11 These river conditions are consistent with the Evidence that the Gila River was never
12 used, from prehistoric times to the date of Statehood, for navigation as a highway for
13 commerce, trade or travel. In spite of a need for transportation to support travel, mining the
14 military, mail and other purposes, which were regularly conducted on rivers in other parts of
15 the United States, the early non-Indian immigrants and government officials in Arizona never
16 proposed that the Gila River was adequate or had potential to serve such purposes.

17 **II. Evidence on the Record**

18 There is abundant evidence in the Commissions Record to support the ANSAC 2009
19 Report's final determination, that the Gila River, in its ordinary and natural condition, was not
20 navigable on February 14, 1912.² See *ANSAC Report, Findings, and Determination*
21 *Regarding the Navigability of the Gila River from the New Mexico Border to the Confluence*
22 *of the Colorado River* dated January 27, 2009 ("ANSAC 2009 Report") at 88.³

23 There is no credible evidence in the Record, including new evidence received
24 subsequent to the ANSAC Report, to conclude that the Gila River, or any proposed segment
25 of it was navigable at Statehood.

26 ² Reference to the entire Evidentiary Record will be cited as "Evidence" or "the Record"

27 ³ The ANSAC 2009 Report included an "Exhibit E: Evidence Log" listing the 28 separate
documentary. References to evidence in connection with the 2004-05 Hearings will be cited as "CR-
EI-[ANSAC's assigned Evidence Item #]" The Fuller Upper Gila Report is CR-EI-2.

1 **A. The Gila River was Not Navigable during Pre-historic Period**

2 There is no Evidence “that would indicate that any of the prehistoric cultures located
3 along the Gila River used the Gila River a means of transportation by boat or other watercraft,
4 and there is no evidence that the River was used for commercial trade, travel or for floatation
5 of logs during the Pre-historic period. All travel along the Gila River during this period was
6 by foot.” ANSAC 2009 Report at 29.

7 **1. Nomadic Civilizations**

8 The Arizona State Land Department (“ASLD”) submitted the, *Arizona Stream*
9 *Navigability Study for the Upper Gila River and San Francisco River: Gila Confluence to the*
10 *State Boundary*, dated August 1997, updated in 2003 (“Fuller Upper Gila Report”).⁴ The
11 Fuller Upper Gila River Report contains abundant archeological findings that confirm the
12 Gila River was never used for navigation or travel by watercraft, by any pre-historic
13 civilizations. see Fuller Upper Gila Report at §3-1 through §3-5.

14 Evidence also shows that the “the entire length Gila River played a major role in the
15 human settlement patterns and occupational success.... In all segments of the river, site
16 density dramatically decreased with distance from the river.” *Navigability of the Gila*
17 *River from the Town of Safford to its Confluence with the Colorado River; Preliminary*
18 *and Final Report and Study*, that study was updated and revised in June 2003 by J.E.
19 Fuller/Hydrology and Geomorphology, Inc. (“Fuller Lower Gila Report”)⁵ at III-20.

20 In fact “most prehistoric habitations along the river were situated close to the river.”
21 Fuller Upper Gila Report at §2-§3. However [a]rchaological research has not documented
22 any use of the river for commercial trade or travel” by any of these early civilizations. Fuller
23 Upper Gila Report at §2-23; §8-2.

24 **2. Sedentary Indian Tribes**

25
26
27 ⁴ CR-EI-14
⁵ CR-EI-2

1 Mr. Allen Gookin testified before the Commission regarding Pre-historic civilizations
2 on the Gila River, and stated that that he was not aware of any evidence that Tribes which had
3 lived along the Gila had ever used a canoe or other watercraft on the River.⁶ Gookin TR at
4 11/16/2005:277.⁷

5 **3. Hohokam**

6 Evidence shows that the Hohokam travelled as far south as the Gulf of Baja to trade for
7 clam shells. Gookin Report Chpt. IV at 2-3. The route taken by the Hohokam went south
8 along the Gila River, to its confluence with the Colorado River, and then from the Colorado
9 River south to the Gulf of California. *Id.* The Hohokam always travelled by foot, never used
10 a boat to travel or to float their goods. *Id.* at 3. Mr. Gookin concluded that had there been a
11 way to utilize the Gila River to carry, trade goods or Hohokam trades, the Hohokam would
12 have taken advantage of this method of travel. *Id.* at 4.

13 Evidence can also be found in the pottery left behind by the Hohokam, on which they
14 painted their methods of travel and trade. *Id.* at 3. Citing a study from the University of
15 Arizona, Gookin reported that none of the decorative documentation on the Hohokam pottery
16 indicate that the Hohokam ever used boats or watercraft to aid them in their trade or travel.
17 The tribesmen walked along the Gila and carried their goods overland. *Id.* “The concept that
18 the traders were recorded on the pottery but boats were not is an additional indication of the
19 Hohokam reliance on trade by walking.” *Id.*

20 There is no Evidence that suggests any of the prehistoric civilizations which lived
21 along the Gila ever used the Gila River as a means of trade and travel by water craft. Fuller
22 Upper Gila Report at §2-23; §8-2. The Commissions’ previous determination that the Gila
23 River was not navigable during prehistoric times is correct, and should be affirmed.

24 **4. Pima Indian Tribe**

25
26
27 ⁶ Mr. Gookin testified before the Commission regarding the navigability of the Gila River on
February 14, 1914. Gookin TR 6/18/2014:720 – 6/20/2004:1020
References to all transcripts in the Record will be cited as “[speaker] TR [date:page]”

1 The Pima Indians traded with other tribes and non-Indians upstream and downstream
2 from the middle Gila. *A Report on the Navigability of the Gila River, prepared for the Gila*
3 *River Indian Community* by T. Allen J. Gookin, dated May 19, 2014.⁸ (“Gookin Report”) at
4 Chpt. IV at 6-7. The Pima engaged in this sort of trade by running very long distances on foot
5 along the banks of the Gila. *Id.* Had the river been navigable, either for the traders to travel
6 on or to float their heavy goods, the Pima would have surely utilized the opportunity for faster
7 and more efficient way of traveling these long distances. *Id.*

8
9 **B. The Gila River was Not Navigated or Susceptible to Navigation Post-1800**

10 The Evidence shows that the Gila River was not used for trade or travel by explorers,
11 trappers, pioneers or the military between 1800 and 1912. Fuller Upper Gila Report at §8-2;
12 Fuller Lower Gila Report IV-64, and III-24.

13 “Although trappers constructed canoes and rafts to use on the Colorado River, they
14 apparently did not float the Upper Gila and San Francisco Rivers.” Fuller Upper Gila Report
15 at §3-1.

16 **Boating Attempts on the Gila River**

17 The Record contains historical narratives, personal diaries, newspaper articles and
18 other accounts of people who traveled near the Gila River.⁹ There is no credible Evidence to
19 support Proponent’s argument that the Gila River was ever successfully navigated or
20 susceptible to navigation.

21 **1. James Ohio Pattie**

22
23
24 _____
25 ⁸ CR-EX-009

26 ⁹ CR-EX-014:1-92 (A series of 92 historical newspaper articles highlighting events and descriptions
27 of the Gila River during various times of year and under various conditions); Fuller Lower Gila
Report at IV-2 to IV-14; Fuller Upper Gila Report §3-27 through §3-29; CR-EX-006 (*Various
Citations to Boating, Channel Conditions, Channel Segmentation and Assessment of Navigability*,
dated 2014 by Win Hjalmarson)

1 The Pattie Narrative is not reliable or credible evidence upon which the Commission
2 should rely. The Proponents of navigation have presented documents and testimony
3 regarding the Narrative of James Ohio Pattie (“Pattie Narrative” or “Narrative”).¹⁰ The
4 document submitted by Proponents is incomplete. (“Proponents Narrative”).¹¹ Proponents'
5 Narrative does not include the three important appendices that editor Timothy Flint (“Flint”)
6 attached to the original publication.¹²

7
8 Flint's influence on the Pattie Narrative is vital for the purposes of ANSAC, **because**
9 **all of the descriptions of the Gila River, and all other topographical illustrations were**
10 **written or drawn by Flint, not Pattie.** Flint at iii-iv. Timothy Flint had never been to
11 Arizona. His descriptions of the rivers and landscape in Arizona were the result of his
12 “acquaintance with the accounts of travelers in New Mexico, and published views of the
13 country...” *Id.* at iii-iv

14 In addition to inserting his own descriptions of the Gila River, Flint admitted that he
15 modified the Pattie Narrative by omitting or softening details which he believed “too
16 revolting to be recorded.” *Id.* at iv.

17 There have been seven (7) editions of the Pattie Narrative published since its original
18 publication in 1831. Five of these editions include new introductions, historical prologues,
19 editor’s preface’s and often notes, warning readers that the Pattie Narrative is not a reliable
20 historical document, and may not even be the writings of James Ohio Pattie.¹³

21 ¹⁰ The title of the original Pattie Narrative is *The personal narrative of James O. Pattie, of Kentucky :*
22 *during an expedition from St. Louis, through the vast regions between that place and the Pacific*
23 *Ocean, and thence back through the city of Mexico to Vera Cruz, during journeyings of six years, in*
24 *which he and his father, who accompanied him, suffered unheard of hardships and dangers, had*
25 *various conflicts with Indians, and were made captives, in which captivity his father died; together*
26 *with a description of the country, and the various nations through which they pass.* By James Ohio
27 Pattie. Edited by Timothy Flint (1831).

¹¹ CR-EX-006 (*The Personal Narrative of James O. Pattie of Kentucky*, was submitted by the
Maricopa County Flood Control District on January 28, 2014. (“Proponents Narrative”).

¹² CR-EI-X036:120

¹³ See CR-EX-036:122 (Reuben G. Thwaites’s Preface notes that Pattie wrote the Narrative from
memory and Pattie did not keep a journal or diary during his 6 year adventure); CR-EX-036:123

1 Historian Hurbert Bancroft (“Bancroft”) wrote about Pattie in the III Volume of his
2 VII Volume series titled *History of California*.¹⁴ In it Bancroft concluded that the Pattie
3 Narrative is “absurdly inaccurate in many respects” while certain parts of the Narrative are
4 “deliberate falsehoods.” Bancroft at 82-83 footnote 43.

5 The Commission heard testimony that James Pattie successfully navigated the Gila
6 River. Fuller Upper Gila Report at §§3-11, §3-23, §§3-31-32; *see also* Fuller Lower Gila
7 Report IV-1; Fuller TR 6/18/2014:649. Evidence shows that the descriptions of the Gila
8 River and the adventures of James Pattie are unfounded, not researched, and irrelevant. The
9 Pattie Narrative does not say that Pattie used boats or other watercraft to travel or carry the
10 goods on the Gila River.

11 Mr. Fuller testified on behalf of the ASLD, and based his testimony on James Pattie
12 directly from “a draft document that the Arizona Attorney Generals had provided with
13 statement of facts.... [a]nd what they were doing was citing to the record.” Fuller TR
14 6/17/2014:330, 378.

15 Proponents' Narrative is not the complete Narrative, although Fuller’s citations and
16 sources purport to come from the complete Narrative. Fuller TR 6/18/2014:649. During the
17 hearing Mr. Fuller was unable to provide citations to for the sources Mr. Fuller included in his
18 own presentation. Fuller TR 6/17/2014:279 and 330-1; 6/18/2014: 697; Fuller S1:80, 101¹⁵;
19 Fuller TR 6/16/2014:177, 183; Fuller TR 6/17/2014:330.¹⁶

21
22 (Milo Quaife’s Introduction explains that the Narrative was the result of an uneducated frontiersman
23 who “upon his return from his six years’ absence, without journals or notes, tells his story with the
24 pride and ador of a youth who has had a great adventure and wants the acclaim that comes in telling
25 it.” at v-vi; Pattie was “more interested in telling a tale in which the narrator should always occupy
26 center stage than in presenting a sober historical recital.” Milo at xiv); CR-EX-036:124 (William
27 Goetzman’s Introduction questions the truth of Patties adventures, and claims that the Narrative was
not written by Pattie, and instead recited orally to Flint who then wrote it down.); CR-EX-036:12
(Richard Batman’s Introduction argues that Timothy Flint did more than just edit the Narrative, and
certainly manipulated Pattie’s story).

¹⁴ CR-EX-036:127

¹⁵ CR-EX-020 includes Two sets of PowerPoint slides were used during Mr. Fullers Presentation

1 Mr. Fuller explained that the conclusions he drew about Pattie and other historical
2 boating accounts, were based on his "Daisy Chain" method of research. Fuller TR 6/17-2014:
3 330. According to Mr. Fuller, his "Daisy Chain" method of research was "to cite to the
4 information previously used in the Land Departments Report". Fuller TR 6/18/2014:698.
5 Mr. Fuller's "Daisy Chain" did not include locating and reading the documents to which he
6 cited in his reports and presentations. *Id.*

7
8 At one point Mr. Fuller stated that his comments about Pattie navigating the Gila River
9 were based on Barbara Tellman's report in which Tellman cited to Goode P. Davis, who cited
10 to the Pattie Narrative. Fuller TR 6/17/2014:336. Unfortunately Mr. Fuller's use of tertiary
11 sources was erroneous, because nothing in Good P. Davis's book states that Pattie went up
12 and down the Gila River in a canoe from Safford to Yuma. Burtell TR 6/20/2014:1132-3.

13 Those historians who have studied the Pattie Narrative agree with the interpretation
14 presented by historians such as Professor J.M. Guinn ("Guinn") whose research concluded
15 that if Pattie's party had made 8 dugout canoes, those boats were floated down the Colorado
16 River, not the Gila. Guinn at 90-91.¹⁷

17 Proponents' testimony, paper and presentations on the Pattie Narrative which use it as
18 evidence of navigability are not credible or reliable.

19 **2. Other Personal Accounts and Newspaper Reports**

20 After reviewing the ASLD's *statement of facts*, Mr. Fuller determined that only one
21 account of historical boating in *Record* was unsuccessful. Fuller TR 6/16/2014:210. Fuller
22 SI:103, 105-112.

23 *Boating in Arizona*, will be referenced as "Fuller S1:[#]"; *Presentation to ANSAC: Gila River*
24 *Navigability* will be referenced as "Fuller S2:[#]"

25 ¹⁶ See also CR-EX-033:127 (*Requested Citations from Jon Fuller regarding June 11, 2014 Power*
26 *Point* ("Fuller Citations")) at 2 (a)-(b)

27 ¹⁷ CR-EX-036:128 (*First Decade of Mexican Rule*, from the book, *History of the State of California,*
a Biographical Record of The Sierras. An Historical Report of the States Marvelous Growth from Its
Earliest Settlement to the Present Time, by Prof. J.M Guinn. Chapman Publishing Co. Chicago
(1906)

1 Mr. Fuller's testified that his method of determining whether a boating trip was
2 "successful" depended on whether the boat, passengers and cargo arrived at the destination.
3 Fuller TR 6/16/2014:209; Fuller S1:121. Fuller was asked to give his definition of a "boat"
4 for the purposes of his testimony, to which he stated "it's a boat if it floats on water." Fuller
5 TR 6/17/2014:491. Mr. Fuller also included reports of intended future boating attempts as
6 "successful," regardless of whether there was evidence that a boat was ever put into the water.
7 Fuller TR 6/14/2014:494-497. Mr. Fuller said he included the reports of intended future
8 boating attempts as successful boating when there was "no information that they didn't
9 complete the trip" even in cases where there was "no information that they did." Fuller TR
10 6/17/2014:495; Fuller S1:104. The distinction between successful boating trips and intended
11 future boating attempts was only disclosed by Mr. Fuller during cross examination. Fuller TR
12 6/14/2014:494-497.

13 Mr. Fuller identified the Stanley Sykes ("Sykes") boating account as one example of
14 "successful" boating on the Gila River. Fuller TR 6/16/2014:197-198; Fuller S1:108. When
15 testifying about Sykes, Mr. Fuller cited to a historical article published in the Coconino Sun.¹⁸
16 In his presentation Mr. Fuller included selections from the article supporting navigability,
17 however he failed to mention that when read in its entirety, the article makes it clear that there
18 was so little water in the River, that for the majority of the time only one man could be in the
19 boat while the other walked along the bank. Fuller TR 6/17/2014:497-499. Mr. Fuller said
20 that he determined the Sykes trip was a successful navigation of the river, because it was
21 successful for one person." Fuller TR 6/17/2014:499.

22 Mr. Fuller speculated that the reason there were so few articles reporting successful
23 navigation of the Gila River was because successful navigation of the Gila River was ordinary
24 and happening all the time. Fuller TR 6/16/2014:51; Fuller TR 6/17/2014:336, 497-498;
25 Fuller S2:108. However, Evidence shows that "[t]here is no problem finding research on the
26

27 ¹⁸ CR-EX-004:62 (*Story of Boating Trip Across Desert Told By Local Oldtimer Coconino Sun, September 7, 1945*)

1 Colorado [River] showing [navigation] was happening all the time.... Further, if you're just
2 looking at newspapers and somebody was doing a commercial enterprise, or traveling, taking
3 people back and forth or anything like that, there would be ads, there would be schedules,
4 there would be other things the newspaper to talk about." Gookin TR 6/19/14:868-869.

5 After careful review of the Record Dr. Douglas Littlefield testified that [N]one of the
6 historical newspaper articles suggested that the Gila River was navigable. Littlefield TR
7 8/18/2014:1363-1364; *See also* Dr Littlefield's *Revised and Updated Report: Assessment of*
8 *the Navigability of the Gila River Between the Mouth of the Salt River and the Confluence*
9 *with the Colorado River Prior to and On the Date of Arizona's Statehood, February 14, 1912,*
10 dated November 12, 2013 ("Littlefield Report") at 127-143.¹⁹

11 Additionally, there is no Evidence that anyone traveling through or living in Arizona
12 during the 1800's ever used the Gila River in its ordinary and natural condition, as a method
13 of trade and travel.

14 **3. Military**

15 Evidence shows that military battalions traveling in Arizona marched overland near
16 and along the Gila River, but no evidence suggests the military used the River for
17 transportation or travel by watercraft.

18 During his testimony Mr. Fuller referred to documents written by members of the
19 Army of the West, also referred to as the Kearny Expeditions in 1846 and 1853. Fuller TR
20 6/16/2014:168, 177-178; Fuller S2:81-82. Mr. Fuller specifically referenced the descriptions
21 of the Gila River written by Stephen Kearny, William Emory, Henry Turner and Dr. Charles
22 Griffin Fuller S2:81 During cross examination Mr. Fuller admitted that he has never read any
23 of the reports or journals he cited during his testimony or in his reports. Mr. Fuller explained,
24 "I'm reporting what was in the Land Department report, and there were others who did the
25

26
27 ¹⁹ CR-EX-002

1 historical research that I am summarizing and reporting here... They may or may not have
2 read [sic] the entire journals, I don't know." Fuller TR 6/18/2014:700.

3
4 During his testimony, Dr. Douglas Littlefield ("Littlefield") told the Commission that
5 William Emory explored the Gila River in 1846 and 1853, prior to any dams or diversions
6 upstream, and both times Emory described the Gila River as not navigable. Littlefield TR
7 8/18/2014 at 1371. Even at points where there was a large volume of water being discharge
8 most of the year, Emory noted that the River was not a navigable stream. Littlefield TR
9 8/18/2014:1370-1873. Emory's descriptions are important because it is one of the only first
10 person accounts by a "historical figure on the river at the particular time offering his opinion
11 about that water." Littlefield TR 8/18/2014:1372.

12 There is nothing in the Record to suggest that anyone in the 1846 and 1853 military
13 expeditions used the River for travel, transportation or for shipping. Fuller TR
14 6/17/2014:340.

15 **4. Federal Land Patents and Surveys**

16 "One of the largest and most important groups of records created in relation to the Gila
17 River prior to and around the time of Arizona' statehood in 1912 are those of the U.S.
18 Government, especially federal surveys done by the U.S. General Land Office." Littlefield
19 Report at 15. Recordings from the federal surveyors are uniquely important in that they are "a
20 perspective of a historical party specifically told to look for navigability at the time he carried
21 out his work..." Littlefield TR 8/18/2014:1317.

22 Federal surveyors were tasked with identifying navigable streams and were given
23 manuals for each specific location instructing them on how to distinguish between navigable
24 and non-navigable waterways. Littlefield Report at 59.

25 Areas along the Gila River were surveyed and resurveyed many times at "varying
26 times of year, in different years, and by several individuals." *Id.* Analyzing the results from
27 these survey's and reviewing the manuals and instructions from which they were derived, Dr.

1 Littlefield determine that Surveyors “work consistently portrayed the Gila River as being a
2 non-navigable stream.” *Id.*

3 The United States Geological Survey became directly involved in examining water
4 resources in the west, and many of the descriptions of those streams, including the Gila River,
5 were included in the Geological Survey’s Annual Reports. *Id.* at 100. For example, *Part II of*
6 *the Eleventh Annual Report of the U.S. Geological Survey* allocated an entire section for
7 discussion of the Gila Basin, describing the rivers found within the basin as:

8 "most difficult and dangerous to examine and control.... In place of
9 recurring annual floods of spring and early summer... these rivers show
10 almost the reverse, being at that season at their very lowest stages - even
11 dry - and rising in sudden floods at the beginning of and during the winter.
12 These floods are of the most destructive and violent character, the rate at
13 which the water rises and increases in amount is astonishingly rapid,
14 although the volume is not great.... From this it will be recognized that the
15 onset of such a flood is terrific. Coming without warning, it catches up
16 logs, boulders [sic] in the bed, undermines the banks, and, tearing out trees
17 and cutting sand-bars, is loaded with this mass of sand, gravel, and
18 driftwood - most formidable weapons of destruction."²⁰

19 The *Twelfth Annual Report of the U.S. Geological Survey* (1889-90) reported the Gila
20 River's dramatic changes in flow, "the floods of the Gila are usually short and violent... It is
21 sometimes impassable for weeks and has the appearance in places as a sea of muddy water."
22 Littlefield, at 101²¹

23
24
25 ²⁰See Littlefield at 91 quoting *Eleventh Annual Report of the United States Geological Survey to the*
Secretary of the Interior 1889-1890; Part II-Irrigation (Washington D.C.: U.S. Government Printing
26 Office, 1891). p. 58; see also ANSAC 2009 Report, at 48-49

27 ²¹ See also Fuller Lower Gila Report at IV-44 Quoting the *Twelfth Annual Report of the United*
States Geological Survey to the Secretary of the Interior, 1890-91, Part II-Irrigation (Washington,
D.C.: U.S. Government Printing Office, 1891), p. 292

1 The *Sixteenth Annual Report of the U.S. Geological Survey* (1894-95) reported
2 changes of flow 'following the sudden storms or 'cloud-bursts' in the mountains... but these
3 floods occur at such irregular intervals.... With the exception of the Colorado River... the
4 streams of the territory are small, and usually intermittent." As quoted in the Gila Report , at
5 IV-45.²²

6 **C. The Gila River was not used for Trade and Commerce**

7 Evidence shows that the Gila River was not navigable for the purposes of trade, travel
8 and commerce. Arizona's prosperity and growth was severely limited by the difficulty of
9 transporting goods and supplies into and out of the Territory.

10 **1. Studies on Arizona Transportation**

11 In a 2011 report titled *Arizona Transportation Report* ("ADOT Report")²³ the Arizona
12 Department of Transportation, United States Department of Transportation and the Federal
13 Highway Administration included a "timeline of transportation-related development" for the
14 State of Arizona, as well as an analysis of Arizona and the "transportation-related
15 developments from the rest of the nation and the world." ADOT Report at 7-14; 15-23.

16 According to the State and Federal government, in the 1850's railroads and steamboats
17 were the "dominate means of commercial transportation" throughout the United States. *Id.* at
18 144. In Arizona, the ferry took travelers across the Colorado River at Yuma, but it was
19 "stagecoaches that carried passengers from town to town across the Territory." *Id.* at 121.

20 "Freight and passengers had been able to reach Arizona by boat since 1852, when
21 steamboat service was established on the lower Colorado River. But travel inland from the
22 river still required a difficult and time-consuming journey by horse or stagecoach, often made
23 worse by the poor conditions of the few existing roads." *Id.* at 144.

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²² Quoting the *Sixteenth Annual Report of the United States Geological Survey to the Secretary of the*
27 *Interior, 1894-9, Part II-Irrigation* (Washington D.C.: U.S. Government Printing Office), p.505.

²³ CR-EX-036:121

1 The Nation's roads "generally consisted of a path worn in the dirt by constant use.
2 Rough and dusty in dry weather, highways became muddy and often impassable under wet
3 conditions." *Id.* at 109. The roads in Arizona, much like the rest of the United States, were so
4 bad that, "whenever possible, travelers and freighters avoided highways altogether in favor of
5 trains or boats." *Id.* Had there been any possibility of traversing the Territory with boats on
6 the Gila River, rather than overland, Arizonians would surely have opted for such an
7 alternative.

8 In 2011 ADOT published the *Arizona State Rail Plan* ("ADOT Plan")²⁴ which states
9 that the Colorado River was navigable and navigated upstream by "light draft stern-wheel
10 boats." ADOT Plan at 2. However, for person, cargo and supplies to reach the interior of the
11 Territory the only means was overland as none of the interior rivers of Arizona, including the
12 Gila River, were navigable. ADOT Plan at 121.

13 In his *Supplemental Volume; Arizona*²⁵ F.M. Irish ("Irish") reported that "the rivers of
14 Arizona are not suited to navigation. Light-drawn steamers can usually ascend the Colorado
15 as far as Yuma, but little or no traffic is carried on by these means. The Commerce in the
16 Territory is carried on by the railways.... [w]ithout railroads, Arizona could have made very
17 little progress toward her present prosperous condition." Irish at 23-24.

18 The Record also shows that there was a direct correlation between the success of a
19 commercial enterprises and its distance from the railroads. Some of the mining towns are not
20 yet reached by the railroads, and freight must be hauled to them in wagons. These wagons are
21 large and heavy, and are drawn by from six to twenty horses or mules. This method is slow
22 and expensive. *Id.* 23-24.

23 As of 1877 the mines on the Upper Gila River utilized overland mail routes to get
24 merchandise from Clifton to Silver City, a distance of 120 miles, via ox and mule
25

26 ²⁴ CR-EX-031:114

27 ²⁵ CR-EX-010-1 (*Supplementary Volume, Arizona*, by F.M. Irish. The Macmillan Company. New
York (1907) ("Irish").

1 transportation.²⁶ *The Handbook to Arizona: Its Resources, History, Towns, Mines, Ruins and*
2 *Scenery*. Hinton, Richard (“Hinton”) at 84.

3 **2. The Territorial Governor Reports**

4 The record contains 16 pre-statehood reports written annually to the United States
5 Secretary of the Interior (“Secretary”) by the Governor or Acting Governor of the Arizona
6 Territory (“Governors Reports”).²⁷ These reports chronicle Arizona’s struggle to develop
7 both in population and commercial activity due to the lack of adequate transportation options.

8 ²⁸

9 The potential for economic prosperity in Arizona was not in question. It was reported
10 that “... Arizona is the natural *gateway* of commerce and travel between the States east of the
11 Mississippi, and California and the Pacific Ocean. Fronting on Mexico it is in position to
12 profit by any developments which may result from the awakening interest of merchants and
13 manufacturers in the trade of that country....” GB 1878: at 7. Regarding the option of using
14 the Gila River to aid in the development of the Territory, the Reports made it clear that the
15 Gila River was not navigable. GR 1896: at 139.

16 Not only would private businesses benefit from alternative transportation in Arizona
17 but “[a]ny aid that the Congress could be induced to give these railroad enterprises would be
18 repaid manifold to the country in increased revenue from increased commercial activity and
19 the opening of new branches of trade, especially from the rich products of Mexico, and in
20 great addition to the common wealth by bringing into use that which now remains locked up
21 in the mines of this country.” GB 1878 at 7.

22 The Territorial Governors described the hindrance of the existing transportation
23 options, stating that “[s]tage lines run from the principal towns to the adjacent mining camps,
24 and the mails are carried regularly to all points in the territory.... Until the completion of the
25

26 ²⁶ CR-EX-021

27 ²⁷ CR-EX-021:93-108

28 ²⁸ Hereafter the Arizona Governor Reports to the Secretary of the Interior will be cited as GR [Year]
at [page].

1 Atlantic and Pacific Railroad all the freight for the Territory comes of the southern route, and
2 from thence is carried by mule teams to the northern portion of Arizona.” GR 1881 at 24.

3 Trade within the Territory was limited to long trips overland, making “the chief desire
4 of the people is that they brought into competition by roads constructed north and south. The
5 physical formation of the country is such that the present transportation facilities an
6 interchange of home products is barred.” GR 1895 at 34.

7 It was clear to the Territorial Governors that that what the Territory needed was “a
8 railway system that will give facilities for the transportation of her products.” GR 1886: at 5.
9 Without exception the Territorial Governors reported that the Territory was in need of “cheap
10 transportation for our imports, lumber, machinery and other building and mining supplies as
11 well as enable us to export our surplus of grain, cattle, and rebellious ore to foreign markets.
12 GR 1895 at 61.

13 The results of the railroad finally reaching the territory had a “marked impetus to all
14 branches of industry.... The building of railroads has attracted capital to the grand
15 opportunities which the country presents, and many heavy investments are being made”. GR
16 1883 at 3-5.

17 Within a short time of the railroads arrival, commerce in Arizona took “a wonderful
18 stride forward,” and the optimism grew about “what will be accomplished when other
19 portions of the Territory are given the advantages of cheap and rapid transportation.” GR
20 1883 at 3-5.

21 The use of a river in Arizona for the purposes of travel, trade and commerce was
22 always limited to use of the Colorado River. According to the Governors Reports, further
23 development of the Colorado River would “open a permanent and direct communication
24 between the Southern Pacific and the Atlantic and Pacific Railroad, thus uniting northern and
25 southern Arizona by a transportation line which will at once bring about an exchange of
26 products and create a large amount of traffic for these lines”. GR 1895 at 61.
27

1 The aim of the Territorial Governors was to convince the Unites States Secretary of
2 Interior that Arizona was a ‘gold mind’ of opportunity and a chance for the United States to
3 benefit from trade and commercial activity into and out of the Territory. The Governors
4 discussed various options for transportation, including railroads, wagon trails, and altering the
5 Colorado River to accommodate navigation upstream and down. Not once did the Territorial
6 Governors suggest that the Gila River might also be used as means of trade or travel. In fact
7 the opposite was always true. If the Gila River was mentioned it was to say that the River
8 was not a navigable. Never was the River suggested as an optional route for traversing the
9 area for any trade, travel or otherwise.

10 **3. Mining & Commercial Transportation**

11 The Record shoes that a “[m]eans of transportation [was] necessary in order to
12 reach markets for the exchange of commodities.” Irish at 23.

13 Dr. Richard Lingenfelter discussed metal mining in the American west in his Affidavit
14 dated May 16, 2014 (“Lingenfelter”).²⁹ Dr Lingenfelter concluded that the mines would have
15 benefitted tremendously if the Gila River had been susceptible to navigation, “they could cut
16 shipping costs by two-thirds, and profitably work a much larger amount of lower grade ore,
17 but they found that even rafting down the Gila, let alone running a steamer up it, was simply
18 not possible most of the year,” Lingenfelter at 9.

19 As late as 1907 “[t]he rivers of Arizona are not suited to navigation. Light-draught
20 steamers can usually ascend the Colorado as far as Yuma, but little or no traffic is carried on
21 by these means. The Commerce in the Territory is carried on by the railways. There are
22 about two thousand miles of railroads in Arizona.... These roads connect Arizona with the
23 ports of the Gulf of Mexico and markets of the Mississippi Valley on one hand, and with
24 Pacific Coast cities on the other.” Irish at 23-24.

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²⁹ CR-EX-008

1 The need for alternative methods of transportation was necessary for any commercial
2 progress to be made by the mines in Arizona, and the Gila River was never considered a
3 viable option. It was reported that “[t]he opening up of transportation facilities to miners of
4 western Arizona and Southeastern Nevada and California would create a most profitable
5 commerce and develop a vast amount of wealth which to-day cannot be utilized for want of
6 transportation.” GR 1895 at 34

7 Lingenfelter determined that “transportation costs, particularly shipping out copper
8 matte and high-grade ores, were very often the largest expenses of the mining operation, and
9 frequently determined whether profitable operations were possible.” Lingenfelter at 8.

10 Mines on the Upper Gila River were forced to utilize overland mail routes to get
11 merchandise from Clifton to Silver City, a distance of 120 miles, via ox and mule
12 transportation. Hinton at 84. The cost and difficulty of overland travel meant mining
13 operations “were constantly looking for cheaper transportation, either by river or rail.”
14 Lingenfelter at 8.

15 The difference in commercial success was dependant not on how close a mine was to a
16 navigable river. One mining company found that the “[s]ince the cost of mining the rich
17 surface ore and shipping them by steamer from Yuma were only a small fraction of that
18 return, the mine could be profitable. But the cost of hauling the ore by wagon, a roughly 300-
19 mile round trip ... was nearly half of the value of the ore, and made the working ores running
20 less than about \$150 a ton unprofitable.” Lingenfelter at 9. Mining operations came to
21 realize that “they could cut shipping costs by two-thirds, and profitably work a much larger
22 amount of lower grade ore, but they found that even rafting down the Gila, let alone running a
23 steamer up it, was simply not possible most of the year,” Lingenfelter at 9.

24 Evidence shows that “mining entrepreneurs would have eagerly undertaken navigation
25 of the Gila if it had been possible. The failure of anyone to do so was not for [a] lack of
26 demand, but for lack of sufficient water. The Gila River was simply not susceptible to
27 commercial navigation” Lingenfelter at 10.

1 In 1890 “the coal fields of Arizona still remain undeveloped, much to our
2 disadvantage... [s]o far but little coal has been found in Apache County within a reasonable
3 distance of the railroad and therefore the northern sections of the Territory are still dependent
4 on the Gallup mines in New Mexico.” GR 1890: at 10 & 26

5 There is evidence that copper mines closer to the Gila River were making progress,
6 however it was not a result of the River. “The mines that are being worked for copper at the
7 present time, with one notable exception, are situated in the southern and central portions of
8 the Territory. This fact is largely due to the early construction of the Atlantic and Pacific, and
9 more recently the Santa Fe, Prescott and Phoenix Railroads, has drawn attention to rich
10 copper deposits in the northern portion of Arizona.”

11 GR 1895: at 34

12 “Owing chiefly to the lack of transportation facilities, and in several localities the
13 scarcity of fuel and water, these rich mines have been, to a great extent, neglected by mining
14 investors and operators, and the development of its many natural resources has been left to the
15 prospector, unaided by outside capital.” GR 1896: at 31

16 “The building of new railroads has enabled the owners of silver properties to make
17 shipment of ore at a profit, and in some sections of the Territory the silver mining is active
18 and profitable.” GR 1901: at 98.

19 At and around February 14, 1912 the profitability of a mine operating was in direct
20 correlation to its proximity to the railroad. “Some of the mining towns are not yet reached by
21 the railroads, and freight must be hauled to them in wagons. These wagons are large and
22 heavy, and are drawn by from six to twenty horses or mules. This method is slow and
23 expensive. Without railroads, Arizona could have made very little progress toward her
24 present prosperous condition.” Irish at 23-24.

25 **D. The Nature of the Gila River Precludes Navigability**

26 **1. Hydrology**

27

1 The United States Geological Survey (USGS) published a series of research treatises
2 known as, Water Supply Papers ("WSP"). ANSAC should continue to rely on those studies
3 which parallel the Annual Reports findings that the nature of the Gila River was unreliable,
4 unpredictable, not susceptible to navigation before, on or after the day of statehood, February
5 14, 1912.

6 Prior to 1912, there were periods of flooding, on the Gila River. The Gila River was
7 not susceptible to navigation under such condition. WSP 162 assessed five floods that
8 occurred on the Gila in 1905. Published in 1906, WSP 162 stated, "The total run-off for the
9 five months is 2,957,400 acre-feet. To appreciate the magnitude of the run-off... it is
10 necessary to remember that this stream is usually dry in this place about ten months of the
11 year.... [The streambed] not only scours out during a flood and fills in after it, but [the
12 channel] changes from one side of the bottom to the other.... This continual change of the
13 river bed has made it exceedingly difficult to secure reliable estimates of the rate of flow, also
14 some of the estimates may be largely an error." *Expert Witness Report, the lower Gila River:
15 a Non-Navigable Study of the Gila River: Colorado Confluence to the Town of Safford* by Dr.
16 Jack August, ("August")³⁰ at 21-22. See also Littlefield at 92.

17 WSP 289, describes the Gila River in 1910 as "torrential," "Sometimes impassable for
18 weeks," and then, within months the riverbed would be completely "dry in some places..."
19 Littlefield, at 92.³¹

20 WSP 1049, indicated that **in February of 1912, "there was no flow at all."** *Id.* at 95
21 (emphasis added)³². Further, WSP 1049 reported that the river remained without flow, until
22 May 1912.³³ ANSAC should continue to rely on portions of the unpublished Geological
23 Survey Reports in the Record.

24
25 ³⁰ CR-EI-17

26 ³¹ See also Fuller Lower Gila Report, at IV-14 ("The bed of the stream is composed of shifting sand
and silt." at IV-14 - quoting WSP 289)

27 ³² August at 21

³³ *Id.*

1 The Report by E.C. Murphy (the "Murphy Report") describes the Gila River in
2 February of 1912. ANSAC 2009 Report, at 49-50. The Murphy Report was the result of an
3 investigation into hydroelectric power sites in Arizona. Littlefield, at 96-97. See ANSAC
4 2009 Report, at 50-51. This investigation was necessary to comply with to the 1910 Enabling
5 Act, which allowed Arizona to take steps to join the Union. Littlefield, at 96. Murphy stated
6 that the Gila had "a very small run-off at the mouth except during very wet periods."³⁴ *Id.* at
7 97., "In all these valleys there is no surface flow at certain places during the low water period
8 of dry years. Though the surface flow may be 0 at one place there may be several second feet
9 at some distance below due to seepage from irrigated lands, or a reduction in cross section of
10 the underground water channel."³⁵ *Id.* at 97.

11 The Murphy reported on the overall lack of water supply of the Gila, regardless of
12 flow, and the unpredictable violent floods. He described as "a broad, sandy, changing
13 channel.... dry for a month or longer each year at Florence, and below the Gila Bend it is dry
14 all the time except during large and long continued floodsAs previously stated there may
15 be several years in succession if very small run-off. During these years only ground water is
16 available for some of this land.... when a flood comes it damages or destroys the head works
17 and little if any of the flood water is utilized."³⁶ Littlefield, at 97-98.³⁷

18 ANSAC should continue to rely on reports published by the United States Bureau of
19 Reclamation (BOR). ANSAC 2009 Report at 52. In BOR's *First Annual Report of the*
20 *Reclamation Service*, published in 1903, provided more evidence of the erratic and
21 unpredictable nature of the Gila River prior to February 12, 1912.
22
23

24 ³⁴ E.C. Murphy, "Water Power Utilization in Arizona," April 1915, Part II, p. 1, Salt River Project
25 Archives, Phoenix, Arizona. As cited in Littlefield, at 97

26 ³⁵ E.C. Murphy, "Water Power Utilization in Arizona," April 1915, Part II, p. 3, Salt River Project
27 Archives, Phoenix, Arizona. As cited in Littlefield, at 97

³⁶ E.C. Murphy, "Water Power Utilization in Arizona," April 1915, Part II, pp. 9-10, Salt River
Project Archives, Phoenix, Arizona. As cited in Littlefield, at 97-98

³⁷ See also August at 93

1 "The sources from which water may be obtained for reclamation of arid
2 lands of Arizona are, taken as a whole, the most erratic or irregular in the
3 entire country. There are comparatively few rivers which flow throughout
4 the year. Most tributaries of the Gila River, beginning in the mountains as
5 perennial streams, lose their waters in the broad open valleys."³⁸

6 BOR catalogued many unpublished documents that, similar to the published *Annual*
7 *Reports* of the U.S. Reclamation Service depicted the Gila River as unpredictable. While
8 many of the unpublished documents dealt with proposed dam construction along the Gila
9 River, none indicated that the river was navigable. Such a finding that would have had major
10 implications for both the State and Federal Government. Littlefield at 99-100. Such
11 documents regarding a proposal for a dam at Gila Bend described the historical characteristics
12 of the Gila River even though they were published after 1912.³⁹ Littlefield at 100.

13 The reports, observations, investigations, personal and public accounts and the plethora
14 of published and unpublished information in the Record make clear that on February 14,
15 1912, the Gila River was in the same condition as had been reported for decades. The Gila
16 was undependable and unpredictable watercourse that saw periods of no flow contrasted with
17 great flow and violent floods during the decades leading up to and including February
18 14, 1912. These conditions made the Gila River wholly unsusceptible to navigation.

19 **2. Geomorphology**

20 The characteristics that made the Gila River non-navigable on the day of statehood,
21 February 14, 1912, are supported by evidence of the River's unchangeable geomorphologic
22 make-up. ANSAC 2009 Report at 62.

23
24 ³⁸ See August, at 24; See Also Littlefield, at 99 (EI 12)

25 ³⁹ Littlefield at 100- 101 (citing a correspondence between Reclamation Service Engineers "Gila had
26 a minimum flow of 125 cubic feet per second all year stating that "I feel quite sure that he must be
27 entirely mistaken, because we both know that there are certain seasons of the year that you can
certainly not get 125 second feet" to which Reed confirmed Hills assumption that they third party had
been mistaken, adding that "On August 10th 1911.... one could walk across the river and hardly
dampen the shoes.").

1 The Gila River was never navigable due to its geomorphology, geography and
2 hydrological characteristics. No evidence has been provided to change final determination in
3 the ANSAC 2009 Report, that the Gila River was non-navigable on February 14, 1912.
4 ANSAC 2009 Report at 86-88. Evidence shows that on February 14, 1912, the Gila River
5 was in such a anomalous state due to extraordinary flooding that navigation would have been
6 inconceivable.

7 Major flooding at the beginning of the 20th century continued to re-define the
8 boundaries of the Upper Gila River. Major flooding in the early 1900's caused the Upper
9 Gila to become "a wide braided channel with several branching channels. Channel
10 boundaries mapped during this period include the entire scoured channel formed after the
11 large floods of 1905, 1914-1915 and 1916."⁴⁰ Fuller Lower Gila Report at VII-8. In 1912,
12 the entire Gila River was continuing to experience changes in channel form due, in large part,
13 to the floods that had occurred in 1905.⁴¹ *Id.* at VII-1.

14 The Gila River floods caused "a great deal of channel and bank cutting and
15 transformed the Gila River into a wide, braided channel with very little depth when it did
16 flow. Different observers at different times of year, under different stream flow conditions,
17 would describe the river in a totally different manner." ANSAC 2009 Report at 68. *See*
18 Fuller Lower Gila Report at VII-8-9. .

19 Evidence of the channel configuration of the Gila shows that the River was not
20 navigable. "[T]he Gila River is a classic example of a dryland river that seldom seeks an
21 equilibrium form. [Graf, 1988; Knight, 1984; Stevens and others, 1975]. Unlike Rivers in
22 humid regions that have more stable channels adjusted for more continuous stream flow with
23

24 _____
25 ⁴⁰ The five floods of 1905 were studied and details reported in WSP 162 as cited in August, at 21-22,
See also Littlefield, at 101

26 ⁴¹ *See* Fuller Lower Gila Report at VII-1 (referring to the Upper, Middle and Lower reaches of the
27 Gila River, "It is clear that from these investigations that all three study reaches were experiences
changes in channel form in 1912, and these changes were driven by a shift from a period of drought
to one of the wettest decades in 500 years.")

1 less variance in discharge, the dryland rivers are inherently more unstable and more prone to
2 changes in channel configuration. In such unstable fluvial systems, channel configuration
3 depends much on the history of previous flood events. Periods of high flood frequency are
4 likely to correlate with periods of increased channel instability.... [T]he premise of this study
5 is that the Gila River responds to secular climate variability by radical changes in channel
6 configuration and that periods of increased large flood frequency correlate with unstable,
7 braided channel conditions. *Id.* at 8-9. *See also* ANSAC 2009 Report at 69.

8 **3. Segmentation**

9 There is little or no evidence that any segment of the Gila River was ever susceptible to
10 navigation prior to and including 1912. The upper Gila River "in 1912, was a wide, braided
11 flood channel." Huckleberry TR 11/16/2005:57. The middle Gila River "in 1912 also had a
12 wide, braided flood channel" *Id.* at 58. The lower Gila River has a "series of channel
13 changes.... that at least certainly for the alluvial reaches of the lower Gila River, we have a
14 wide, braided flood channel in 1912." *Id.* at 59. The Gila River Characteristics as a "wide,
15 braided and prone to changes in channel configuration would indicate that the river was not
16 navigable, primarily because of the large, natural floods that had occurred in the 1890's and
17 early 1900's, and not because of the withdrawals or diversions from irrigation." ANSAC
18 2009 Report at 69-70.

19 "[T]was never sufficient water to actually use the river as an avenue for transportation
20 or highway for commerce... it is very clear that the natural major floods of the 1890's and
21 early 1990's changed the riverbed completely so that by 1912, it was a braided stream with
22 sand islands and sandbars and other obstructions and that it alternated between no flow at all,
23 in part through infiltrations, and large floods... it was not susceptible to navigation in 1860 or
24 before...but even if it had been the great floods of the 1890's and really 1900's so changed the
25 character of the river that it was clearly not navigable or susceptible of navigability on the day
26 of statehood... it was not ever navigable in fact...It is a typical dry land or desert river."
27 Huckleberry TR 11/16/2005:67,69-70.

1 The great weight of Evidence shows that neither the Gila River nor any segment of it
2 was navigated or susceptible to navigation on or around February 14, 1912. In Dr. Stanley
3 Schumm's report the *Geomorphic Character of the Lower Gila River*⁴² ("Schumm") dated
4 June 2004, he determined that "[a]ll the evidence indicatés that the 1905-1906 floods
5 dramatically widened the Gila River and rendered unfit for navigation." Schumm at 12.

6 **III. Summary and Requested Action**

7 The ANSAC 2009 Report refers to evidence already in the record when it made the
8 previous determination that on the date of statehood, February 14, 1912, the Gila River was
9 not navigable. The Proponents' have failed to meet their burden of proof by the
10 preponderance of the evidence that the Gila was navigable at Statehood. Therefore the
11 Commission should conclude that neither the Gila, nor any segment of it was navigable at
12 Statehood.

13 The San Carlos Apache Tribe joins in the Opening Post Hearing Memorandum of
14 Freeport Minerals Corporation dated November 14, 2014.

15
16 DATED this 14 day of November, 2014.

17
18 **THE SPARKS LAW FIRM, P.C.**

19
20 By 

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