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**BEFORE THE ARIZONA NAVIGABLE STREAM ADJUDICATION COMMISSION**

<b>IN RE DETERMINATION OF THE NAVIGABILITY OF THE VERDE RIVER</b>	) ) ) ) ) )	<b>No. 04-009-NAV  PHELPS DODGE CORPORATION'S OPENING MEMORANDUM FOLLOWING THE HEARING OF JANUARY 18, 2006</b>
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On January 18, 2006, the Arizona Navigable Stream Adjudication Commission (the “Commission”) conducted public hearings and accepted evidence regarding the navigability of the Verde River as of February 14, 1912, in accordance with A.R.S. § 37-1123.<sup>1</sup> Phelps Dodge Corporation (“Phelps Dodge”) requests that the Commission determine the Verde River is not navigable as that term is defined in A.R.S. § 37-1101(5). Neither the law nor the evidence submitted in this case supports a finding of navigability under state or federal law.

**I. Navigability for Title Purposes Has Important Ramifications and, thus, a Precise Statutory Definition.**

Title to the beds of any navigable watercourses passed to the State of Arizona when it joined the United States on February 14, 1912. See Defenders of Wildlife v. Hull, 199 Ariz. 411, 415-16, 18 P.3d 722, 726-27 (App. 2001); Arizona Center for Law in the Public Interest v.

<sup>1</sup> In addition, David Weedman of the Arizona Game and Fish Department gave testimony on November 16, 2005, regarding the Verde and Gila Rivers.

Hassell, 172 Ariz. 356, 360, 837 P.2d 158, 162 (App. 1991). Arizona statutes define a navigable watercourse as one

that was in existence on February 14, 1912, and at that time was used or was susceptible to being used, in its ordinary and natural condition, as a highway for commerce, over which trade and travel were or could have been conducted in the customary modes of trade and travel on water.

A.R.S. § 37-1101(5) (2001). See Defenders, 199 Ariz. at 426, 18 P.3d at 727; see id., 199 Ariz. at 419, 18 P.3d at 730 (citing The Daniel Ball, 77 U.S. (10 Wall.) 557, 563 (1870)). Numerous characteristics of a watercourse are relevant to an inquiry into its navigability. See Defenders, 199 Ariz. at 421-26, 18 P.3d at 732-37. While no single one of these characteristic is dispositive, the Commission may consider each as relevant to its ultimate determination of navigability for purposes of the State's title to the riverbed.

The Commission is charged with gathering and considering evidence of these and other relevant characteristics of a river at the time of Arizona's statehood to determine the river's navigability. A.R.S. § 37-1123. Navigability must be established by a preponderance of the evidence. A.R.S. § 37-1128(A). The preponderance of the evidence standard requires that the totality of the evidence makes it more probable than not that the characteristics of a navigable stream existed. See Arizona Navigable Stream Adjudication Commission Report, Findings and Determination Regarding the Navigability of Small and Minor Watercourses in Yuma County, Arizona (Feb. 20, 2003), at 16-17 (quoting Black's Law Dictionary (5<sup>th</sup> ed. 1979) at 1064). See also Ison v. Western Vegetable Distributors, 48 Ariz. 104, 111-12, 59 P.2d 649, 653 (1936) ("Preponderance of the evidence means such evidence as when weighed with that opposed to it has more convincing force, and from which it results that a greater probability is in favor of the party upon whom the burden rests."). Mere anecdotal examples are insufficient to carry this evidentiary burden. See Simmons v. Johnson, No. CIV.A.7:05CV00053, 2005 WL 3159555, at

\*3 (W.D. Va. Nov. 22, 2005) (holding anecdotal evidence insufficient to satisfy plaintiff's burden where contrary to clear weight of evidence).

## II. Evidence Regarding the Verde River Does Not Meet the Statutory Definition of a Navigable River.

With respect to the Verde River, the evidence provided to the Commission before and during its hearing fails to satisfy the statutory test for a navigable river. Compelling documentary evidence submitted to the Commission demonstrating the non-navigability of the Verde River includes (i) a report titled *Arizona Stream Navigability Study for the Verde River: Salt River Confluence to Sullivan Lake*, which was prepared by JE Fuller/Hydrology & Geomorphology, Inc. for the Arizona State Land Department in November 1993 and revised in June 2003 (the "*Fuller Report*"); (ii) a report by Douglas R. Littlefield, Ph.D., titled *Assessment of the Verde River's Navigability Prior to and on the Date of Arizona's Statehood, February 14, 1912*, dated July 7, 2005 (the "*Littlefield Report*"); and (iii) a report by Stanley A. Schumm, Ph.D., P.G. titled *Geomorphic Character of the Verde River*, dated December 2004 (the "*Schumm Report*"). When the overwhelming amount of evidence contained in these reports and in other documents submitted to the Commission is analyzed according to the relevant standards of navigability, it becomes clear that the Verde River was not navigable as of February 14, 1912.

A river is navigable in law if it is navigable in fact. See Defenders, 199 Ariz. at 419; 18 P.3d at 730 (citing The Daniel Ball, 77 U.S. (10 Wall.) at 563). In order to be navigable in fact, as of February 14, 1912, the Verde River must either have been (i) actually used as a highway for commerce over which trade and travel was conducted, or (ii) susceptible of being used as a highway for commerce over which trade and travel may have been conducted.<sup>2</sup> See

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<sup>2</sup> On February 27, 2006, Phelps Dodge submitted a brief regarding the meaning and necessity of "commerce" when determining the navigability of a watercourse, which it herein incorporates by this reference. See Phelps Dodge Corporation's Brief Regarding the Meaning and Necessity of "Commerce" when Determining the Navigability of a Watercourse.

A.R.S. § 37-1101(5) (2001); Defenders, 199 Ariz. at 419, 426, 18 P.3d at 730, 737 (citing The Daniel Ball, 77 U.S. (10 Wall.) at 563). “The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of [a] river. . . .” United States v. Crow, Pope & Land Enterprises, 340 F. Supp. 25, 32 (N.D. Ga. 1972) (quoting The Montello, 87 U.S. (20 Wall.) 430, 441 (1874)). All evidence must be examined when making a determination of navigability, and no relevant facts should be excluded. Defenders, 199 Ariz. at 425, 18 P.3d at 736. However, the Commission’s final determination must be based on whether the proponents of navigability have met the preponderance of evidence standard set forth in A.R.S. § 37-1128.A.

A. **The Verde River Was Never Actually Used as a Highway for Commerce over which Trade and Travel Was Conducted nor was it Ever Considered Navigable.**

Federal surveys, federal and state conduct concerning the granting of patents, and a plethora of archaeological and historical evidence clearly show that the Verde River was neither actually used as a highway for commerce over which trade and travel was conducted, nor has it ever been considered to be a navigable watercourse.

1. **Federal Land Surveys**

The *Littlefield Report* contains persuasive evidence in the form of survey records, which establish that all of the federal surveyors who surveyed the territory through which the bed of the Verde River ran did not consider it navigable prior to February 14, 1912. Because the primary purpose of these surveys was to prepare the region for homesteading by settlers, the United States specifically required the surveyors to identify all streams they considered navigable. See Littlefield Report, at 10, 73. Accordingly, the plats and field notes of these surveyors provide significant insight into the characteristics of the Verde River. See id., at 10.

The federal government gave surveyors precise instructions regarding the identification of navigable streams. The 1851 *Instructions to the Surveyor General of Oregon; Being a Manual for Field Operations* specifically instructed surveyors to plant “meander corner posts” whenever they came upon navigable bodies of water. See id., at 38. Meandering thus allowed surveyors to delineate between navigable bodies of water on which “meander corner posts” were to be established, and non-navigable waterways on which only “witness posts” were to be placed. See id. In 1864, the surveyor manual was modified to require that, even if a stream is not navigable “under the statute,” it should, nevertheless, be meandered if it was a “well-defined artery of internal communication” and had a “uniform width.” See id., at 40. In 1890, the United States General Land Office significantly changed the instructions regarding the meandering of water bodies. See id., at 43. These new survey instructions required that both banks of navigable rivers be meandered, as well as non-navigable streams that were at least three chains in width. See id. Four years later, the 1894 Manual was issued. This manual required that “[s]hallow streams, without any well-defined channel or permanent banks *will not be meandered. . . .*” Id., at 44 (emphasis in original). Finally, in 1902, the federal government again revised the survey manual, making clear that the surveyors were not to meander streams less than three chains wide. See id., at 45.

With these strict instructions in mind, an analysis of the surveyors’ field notes and plats reveals that these surveyors did not consider the Verde River to be navigable. See id., at 72–73 (summarizing analysis of federal surveys over several decades that “consistently portrayed the Verde River as being a non-navigable stream”). Dr. Littlefield concluded that while many areas through which the bed of the Verde River ran were surveyed and resurveyed at different times of the year and in different years, “in not one instance did any surveyor record the Verde River as

having characteristics that would have been consistent with a navigable body of water.”<sup>3</sup> Id. Given the large number of surveys conducted by government surveyors throughout Arizona and the entire West, these surveyors doubtlessly “had a lot of familiarity of what to look for.” (Tr. at 81.) Therefore, the fact that none of these government surveyors portrayed the Verde as navigable is probative evidence of non-navigability. As Dr. Littlefield testified, in those cases where government surveyors have found watercourses outside of Arizona to be navigable “they did meander both banks quite clearly and put all the meander data in their field notes and on the plats.” (Tr. at 82.)

In Lykes Brothers, Inc. v. United States Army Corps of Engineers, 64 F.3d 630 (11th Cir. 1995), the Eleventh Circuit made clear that the action of surveyors *is* probative evidence of a watercourse’s non-navigability.<sup>4</sup> Id. at 635-36 (holding that given the instructions under which the surveyor operated in 1871, “his meandering of only one bank of [the c]reek is probative of whether [the] creek was navigable in 1871”). See also Harrison v. Fite, 148 F. 781, 784 (8th Cir. 1906) (“The action of the government surveyors in meandering a body of water or in surveying its bed is to be considered as evidence upon the question of its navigability or unnavigability at that time. . . .”). Accordingly, the evidence of surveyor conduct presented to the Commission serves as probative evidence that the Verde River was not considered to be a navigable waterway around the time Arizona was admitted into the Union.

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<sup>3</sup> Although there were a few instances where meanders were undertaken by government surveyors, based on notations made in the field notes of these surveyors, Dr. Littlefield concluded that the basis for these meanders “stemmed from the instructions to meander non-navigable bodies of water over three chains [in width].” *Littlefield Report*, at 64. See also id., at 68 (explaining that “[a]t nearly every intersection with the river, [the surveyor] routinely noted the width of the bed of the river as well as the distance across the channel of water that lay within the bed itself. . . . [was] well over three chains wide. In addition, [his] description of the Verde at places where survey lines intersected that stream denoted a river that would be difficult to navigate.”).

<sup>4</sup> Although Lykes Brothers involved a determination of navigability for purposes of federal regulatory jurisdiction under the commerce clause rather than a determination of title to riverbeds, the Ninth Circuit has recognized that “the two standards are nearly identical, with the commerce clause test being adopted and applied to riverbed title cases.” City of Centralia v. Federal Energy Regulatory Commission, 851 F.2d 278, 281 (9th Cir. 1988).

## 2. Federal Patents and State Land Grants

The *Littlefield Report* also contains persuasive federal authority clearly establishing that neither the United States government nor Arizona considered the Verde River to be navigable around the time of and after Arizona's statehood. This conclusion is supported by evidence of grants of land patents by the United States and Arizona. According to the United States Supreme Court, the natural inference to be drawn from the federal government's grant of lands through which the bed of a river runs is that the river is not navigable. See Brewer Elliott Oil & Gas Co. v. United States, 260 U.S. 77, 86-87 (1922) (stating that such grants are "consistent with [Congress's] general policy"). Evidence that the United States and Arizona have consistently treated the Verde River as non-navigable must be afforded significant weight when determining the river's navigability. See United States v. Oregon, 295 U.S. 1, 23 (1935). See also Choctaw Nation v. Oklahoma, 397 U.S. 620, 634 (1970) (stating that the "natural inference" to be drawn from the federal government's grant of fee simple title to a tract of land through which a river flows is that all the land was conveyed, "including the banks and bed of rivers." As the Supreme Court succinctly stated in Choctaw, past land grants by the United States demonstrate that it certainly knows how to draft language of exclusion into those grants when it so intends. See id.

Unless a patent contains a reservation or exception, it "passes to the patentee everything in anywise connected with the soil, forming any portion of its bed, or fixed to its surface to the extent that the government has ownership and power of disposal." 73A C.J.S. Public Lands § 140. See also Energy Transp. Sys., Inc. v. Union Pac. R.R. Co., 435 F. Supp 313, 317 (D. Wyo. 1977), aff'd 606 F.2d 934 (10th Cir. 1979) (explaining that "a patent passes to the patentee all interest the government has, on the date of that patent, to everything embraced within the meaning of the term 'land'"). Therefore, patents that did not exclude the bed of the Verde River

due to possible ownership by Arizona is probative evidence the river was not considered to be navigable by the United States and the State.

The federal government granted in excess of 120 separate patents that either abutted or crossed the Verde River in Arizona. *See Littlefield Report*, at 175. In addition, the State conveyed to private parties a number of parcels that crossed the bed of the Verde River. *See id.*, at 108, 110. Despite the fact that the Verde River either bordered or crossed all of the land conveyed in these patents, none of them excluded lands that were within the banks of the Verde. *See id.*, at 110. The fact that the United States and the State of Arizona did not reserve rights to the Verde River in these patents strongly evidences that the Verde has never been considered a navigable waterway by either the federal or state government. The following chart summarizes some of these federal and state patents as analyzed in the *Littlefield Report* (pages 94 – 110):

Patent No.	Year	Patent Location	Verde River Reference	Evidence of Non-navigability
318	1894	T17N, R1W, Sec. 3	<ul style="list-style-type: none"> <li>▪ Witnesses for the patentee stated the following:               <ul style="list-style-type: none"> <li>▫ “[T]he Verde River runs through it.”</li> <li>▫ “Verde River runs through the center of it.”</li> </ul> </li> <li>▪ Patentee stated that his claim includes the “Upper Verde River.”</li> </ul>	▪ Patentee received title to the entire tract; no portion of the bed and banks was reserved for Arizona.
444072	1914	T1N, R1E, Secs. 20 & 29	▪ The District Forester noted that a “tract crosses the Verde River.”	▪ No acreage reserved for the State of Arizona’s sovereign rights.
793381	1921	T17N, R3E, Sec. 33	▪ Verde River ran through the southwest corner of the parcel.	▪ No land reserved for the State’s sovereign rights.
335072	1913	T17N, R3E, Sec. 7	▪ The acting District Forester noted that “[t]he Verde River runs through the claim from east to west.”	▪ No land was reserved for Arizona.



Patent No.	Year	Patent Location	Verde River Reference	Evidence of Non-navigability
264746	1931	T16N, R3E, Secs. 17 & 20	▪ A GLO inspector observed that "Sec. 17 is crossed by the Verde River," and "[t]he river bed in the northerly portion of Sec. 17 is sandy and gravelly."	▪ Patentee was granted title to the entire parcel, without any lands reserved for the State.
330	1895	T16N, R3E, Sec. 17	▪ A witness for the patentee stated that the parcel "is on the Verde River."	▪ Patentee was granted title to the entire parcel, without any lands reserved for the State.
78	1884	T15N, R3E, Sec. 12	▪ Historical mapping sources indicate that the Verde ran through the parcel.	▪ No land reserved for the State.
680819	1919	T15N, R3E, Sec. 12	▪ Patentee noted that the parcel was "cut up considerable [sic] by the river and washes."	▪ No lands were withheld in favor of the State.
88173	1909	T15N, R4E, Sec. 33	▪ The western portion of the parcel was within the bed of the Verde River.	▪ Patent was issued for the entire acreage; none was reserved for the State.
171435	1911	T15N, R4E, Sec. 18	▪ Verde flowed through he entire parcel. ▪ Ten months out of the year the river was capable of being crossed on foot.	▪ No land was withheld on behalf of Arizona's sovereign right to ownership of the bed and banks of navigable streams.
238	1889	T1NS, R4E, Secs. 2 & 3	▪ Historical maps indicate that the Verde ran directly through the parcel.	▪ No acreage was removed from the final patent due to Arizona's sovereign right to the bed and the banks of the Verde River.
149	1884	T1NS, R4E, Sec. 4	▪ River was present in the tract.	▪ There is no evidence that acreage was withheld from the patent in favor of Arizona.
844648	1922	T13N, R5E, Sec. 27	▪ According to contemporary sources, 20 acres of the parcel "lies in the river bed."	▪ The patent was awarded with no reservations in favor of the State.
134	1886	T13N, R5E, Sec. 8	▪ Verde River ran through the parcel.	▪ Patent awarded to patentee without reservation of land for the State.

Patent No.	Year	Patent Location	Verde River Reference	Evidence of Non-navigability
439098	1914	T15N, R4E, Sec. 18	<ul style="list-style-type: none"> <li>▪ The Verde ran through a large portion of the claim.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Entire patent was awarded with no land reserved for the State.</b></li> </ul>
717758	1919	T15N, R4E, Sec. 18	<ul style="list-style-type: none"> <li>▪ Patentee declared that “there is through or upon such land Verde River.”</li> <li>▪ An agent for the GLO wrote that “[t]he Verde River passes through said described lands.”</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>The United States patented the land without reserving the bed and banks for Arizona.</b></li> </ul>
53654 6938 7323 (AZ)	1980s	T15N, R3E, Sec. 12	<ul style="list-style-type: none"> <li>▪ Lands located in the bed of the Verde River.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>The State did not retain any portion of these three state patents when it sold them to private parties.</b></li> </ul>

The fact that Arizona did not chose lands in lieu of lands located in Sections 2, 16, 32, and 36 through which the bed of the Verde River crossed serves as further evidence that Arizona’s legislature did not consider the river navigable.<sup>5</sup> See id. at 107. Had Arizona deemed the Verde navigable, it would surely have asked for in-lieu lands to compensate for lands lying within the bed of the Verde – lands it would have been entitled to had the river truly been navigable. It is implausible that a sovereign power would forego title to lands to which it believed it had a legal right. As such, the only logical conclusion is that Arizona’s leaders did not consider the Verde River navigable as of February 14, 1912. This conclusion is supported by the Arizona Territorial Legislature’s declaration that “the Colorado River is the only navigable water in this Territory” in its December 28, 1865 memorial. Id. at 129. See Oregon, 295 U.S. at 23 (courts should give weight to government’s consideration of watercourse as non-navigable). See also Loving v. Alexander, 745 F.2d 861, 866 (4th Cir. 1984) (finding acknowledgements of navigability by the Virginia General Assembly to be relevant evidence of river’s navigability); Washington Water Power Co. v. Federal Energy Regulatory Commission, 775 F.2d 305, 328-30 (D.C. Cir. 1985)

<sup>5</sup> The United States gave Arizona the right to select an equal acreage of federal public domain land as indemnity *in lieu* of those portions of school section lands lying within the banks and the bed of navigable waterways.

(holding War Department's and Army Corps of Engineers' findings, conclusions, and interpretations regarding river's non-navigability provide "substantial evidence" that it is not navigable) (emphasis in original).

### 3. Archaeological and Historical Evidence of Nonuse

The *Fuller Report* contains a compilation of archaeological studies that confirm the Verde River was never actually used as a highway for commerce over which trade and travel was conducted. According to the studies, the region has been inhabited for many thousands of years, and the existence of ancient canals indicates that the Verde River was used for irrigation for at least 1,000 years. See *Fuller Report*, at 2-9. The *Fuller Report* relies on evidence of prehistoric sites overlooking the Verde River to speculate that the river may also have been used for trade by early inhabitants of the area. See id. at 2-11. However, the *Fuller Report* also states that Native Americans may have actually used these sites to defend themselves and that the true nature of the use "is not known and, at this point in time, can only be speculated upon." Id. at 2-9, 11. However, "[m]ere . . . speculation [is] no substitute for evidence." Estate of Harber, 102 Ariz. 285, 294 (1967). The fact that "no evidence of prehistoric boating has been documented" demonstrates that although the river may have served some useful purposes to Native Americans; they never used it as a highway for commerce. Id., at 2-14. Moreover, Mr. Fuller testified that even his conclusions regarding prehistoric use of the Verde River as a communications route are "based on [] assumption." (Tr. at 10.)

The overwhelming majority of evidence shows that the Verde River never was used as a highway for commerce. Historical accounts contained in the *Fuller Report* and *Littlefield Report* all lead to the conclusion that nineteenth century travelers showed no more interest in traveling on the Verde River than did earlier inhabitants of the region. Despite the fact that "overland transportation was difficult," it is clear that the vast majority of transportation in the region was

via horseback mule, train, wagon, stagecoach, and later, railroad. *Fuller Report*, at 3-1, 22. The fact that these people built roads and traveled *along* the Verde rather than floating it demonstrates that the river was never used as a highway for trade or travel. See *Lykes Brothers*, 821 F. Supp. at 1459 (reasoning that if creek had truly been navigable, “[i]t seems probable” it would have been used to transport men and supplies rather than using overland transportation routes).

Oral histories of the Verde River contained in the *Fuller Report* confirm “nobody used for [sic] the river for commercial purposes either prior to or following the territorial period.” *Fuller Report*, at 4-2. According to a professional historian at the Fort Verde State Historical Park, “describing the Verde as a navigable river was like ‘trying to make a silk purse out of a sow’s ear.’” *Id.*, at 4-2. These statements comport with Dr. Littlefield’s conclusion that the hundreds of primary and secondary sources he surveyed “overwhelmingly illustrate that prior to and at the time of Arizona’s statehood the Verde River was considered to be not navigable by virtually every contemporaneous observer.” *Littlefield Report*, at 1. This is significant given the fact that by the mid-1800s “[t]here were a lot of people along the Verde . . . and so there are quite a few observations by parties who were on the scene.” (Littlefield, Tr. at 96.)

The *Fuller Report* references the use of ferries to cross the Verde during periods of high water. For example, the report discusses a picture of two soldiers who used a collapsible U.S. Army issue boat “used to take couriers across the Verde *in times of high water.*” *Id.*, at 3-20 (emphasis added). However, as elucidated by Dr. Littlefield, the evidence surrounding the use of this boat suggests that it “was not used year round (there were fords available for crossing the river at most times), but that during flood season (usually January to March), the boat was used to get across the river.” *Littlefield Report*, at 155.

Evidence of use of boats by inhabitants of the area to reach the other side of the Verde River during flood events does not lend itself to a determination that the river was navigable as of Arizona's statehood. Any such use of boats or ferries demonstrates only that the Verde was an impediment to trade and travel, and not a highway for commerce. Ferries often serve as the functional equivalent of bridges allowing people to cross at points of a river that are too deep or too wide to be crossed by foot, horse, or automobile. See North Dakota v. United States, 770 F. Supp. 506, 511 (D. N.D. 1991). As stated in United States v. Crow, Pope & Land Enterprises, Inc., 340 F. Supp. 25 (N.D. Ga. 1972), "the existence of ferries is no more an example of commercial use than the presence of a bridge or railroad trestle whose primary purpose is to avoid the river rather than to employ it as a means for trade and transportation." Id., at 35. The evidence shows that had the Verde River not existed, these people would have had a far easier time getting to their various destination points. See North Dakota 770 F. Supp. at 511 ("Clearly, those persons who used the ferries to cross the river would have had less difficulty making their trips had the river not existed."). Therefore, the historical use of boats to ferry across the Verde demonstrates it was an obstruction to commerce in the region, and not a highway for commerce. As explained by Dr. Littlefield, although he found evidence of occasional use of boats on the Verde to cross it, "nobody used the river reliably for navigation anywhere along it." (Tr. at 79.) The following statement in the *Fuller Report* aptly confirms the reason for the existence of boats in the region prior to Arizona's statehood: "Review of historical records of boating gives the general impression is [sic] that there was no shortage of boats in the Salt River Valley. Whenever a boat was needed *to cross a flooded river*, even during the period early exploration, boats were borrowed from local residents, used and returned." *Fuller Report*, at 8-2-3 (emphasis added).

The evidence shows that the principal economic activities along the Verde River have been farming, military, and mining; there is no evidence that the river was used reliably for trade or travel. See id., at 3-1. This lack of historical use of the Verde for such purposes supports the conclusion that the Verde River is not, nor has it ever been, a navigable waterway serving as a highway for commerce.

**B. The Verde River is not Susceptible of Being Used as a Highway for Commerce over which Trade and Travel May Be Conducted.**

As discussed in the immediately preceding section, archaeological and historical evidence demonstrates that the Verde River has never been used for navigation. The logical inference from this lack of actual use, especially in light of the fact that humans have lived and frequently traveled in the vicinity of the river for thousands of years, is that the Verde River was not and is not susceptible to navigation. The physical characteristics of the Verde further demonstrate this fact.

**1. Flow Characteristics**

An analysis of historical accounts of early attempts at floating the Verde River indicates that its flow was far too unreliable and erratic for it to be used as a highway for commerce. Although the *Fuller Report* includes a few anecdotal accounts of boating on the Verde, these stories merely demonstrate that the Verde was not susceptible to being used for trade or travel, and, at times, actually served as an impediment to transportation. For example, there is a 1908 account of two farmers in the Upper Verde Valley who purchased a threshing machine and attempted to carry it down Copper Canyon by road, despite the fact that “[t]he roads in those days were not very good for that kind of equipment to travel.” Id. at 3-17. According to the account, “[t]he Verde was their worst enemy, as there was always quick sand.” Id. Apparently, “the old engine bogged down to the fire box many times. It was quite a job digging it out and pulling it out with horses.” Id.

Other accounts demonstrate that attempts to use the Verde River as a highway on which to conduct commerce met with abject failure. According to one account, in 1873, one Charles Hayden attempted to float logs down the Salt and Verde Rivers to establish a lumber mill at Tempe. Both attempts failed. See id., at 3-20. The *Fuller Report* also discusses attempts to ship goods in the Verde Valley between 1910 and 1920. However, these attempts could only be characterized as failures given the fact that the boats “needed to be emptied of cargo to pass the rapids downstream of Camp Verde.” Id., at 8-3.

The *Fuller Report* includes two newspaper accounts describing soldiers boating down the Verde from Fort McDowell to Phoenix. See id., at 3-20–21. The first is an 1883 newsletter that appeared in the *Arizona Gazette*, which declared the Salt River to be navigable. See id., at 3-20. However, the veracity of this article is extremely questionable given the fact that its apparent purpose was to plea for funds from a federal “river and harbor appropriation.” Id. The other account, an 1888 article appearing in the *Phoenix Herald*, described the death of Major E.J. Spaulding. See id., at 3-20–21. However, although the article does a nice job at explaining the reason for the major’s untimely death, which occurred just prior to lifting his boat over the Mesa Dam, it falls far short of demonstrating that the Verde River was a navigable waterway.

Another account appearing in the *Fuller Report* is a story of two gentlemen who apparently launched a flat-bottom boat in 1931 and attempted to boat from Clarkdale to Granite Reef Dam. See id., at 3-21. However, five weeks after they started their 70-mile trip they still had not reached their destination and decided to cut their trip short. See id. Such an experience can hardly be described as successful. Equally unpersuasive is an *unpublished* report of a boat used to haul rock (Tr. at 13), and an article that *could not be located*, which supposedly discussed an attempt to float logs or sawn timber down the Verde. *Fuller Report*, at 3-21.

Such scattered anecdotal accounts – some of which cannot be verified and are of questionable veracity – can hardly be considered persuasive evidence of the Verde River’s navigability at statehood. Furthermore, “[t]he mere fact that a river will occasionally float logs, poles and rafts downstream in times of high water does not make the river navigable.” Crow, 340 F. Supp. at 32. As the Supreme Court stated in The Montello,

[i]t is not, however, . . . ‘every small creek in which a fishing skiff or gunning canoe can be made to float at high water which is deemed navigable, but, in order to give it the character of a navigable stream, it must be generally and commonly useful to some purpose of trade or agriculture.’

The Montello, 87 U.S. (20 Wall.) at 442.

The above-quoted language from Crow and The Montello makes clear that the burden of proof cannot be sustained merely by proffering scant anecdotal evidence of alleged floating events, the extent and exact locations of which are largely uncertain. Such evidence is simply insignificant compared to the weight of evidence tending to prove non-navigability. Jim Slingluff testified at the Verde hearing that “[t]here’s just not long, big sections of fast water at normal flow at any season.” (Tr. at 110.) Moreover, “[t]he Verde, Salt, and other Arizona streams are shallow and rocky.” Jim Slingluff, *Stream Canoeing in Arizona*, Arizona Hunter & Angler (April 1991), at 22. See also Schumm Report, at 8 (explaining that the lower Verde River has “a cobble- and gravel-bedded channel that flows over shallow or exposed bedrock”). Mr. Slingluff’s characterization of the Verde as being a “shallow and rocky” stream – and, therefore, not conducive to navigation – is plainly illustrated in many of the slides he presented at the January 18, 2006 hearing. See Exhibit “A.”

These characteristics indicate that the Verde River is not navigable because, as the United States Supreme Court long ago explained, when making a determination as to the navigability of a watercourse, the primary concern is whether it has long stretches of navigability. See United States v. Utah, 283 U.S. 64, 77 (1931). See also Oklahoma v. Texas, 258 U.S. at 591 (finding



river, whose use for transportation was “exceptional” and confined to “irregular and short periods of temporary high water,” to be non-navigable); North Dakota, 770 F. Supp. at 512 (refusing to find river navigable based on evidence of occasional use during relatively short periods of intermittent high flow).

Various historical descriptions of the torrential nature of the Verde River, and to a greater extent, published and unpublished records from the United States Geological Survey (U.S.G.S.), the United States Reclamation Service, and the United States Office of Indian Affairs demonstrate that the Verde River’s fluctuating flows and major channel changes combined to create an effective impediment to the use of the river as a highway for commerce. This evidence shows that the Verde’s flow was either too low for it to be a reliable mode of transportation for even the smallest of watercraft, or, on those rare occasions when high flow rates did occur, the extremely high velocities and dangerous conditions made the river far too wild and dangerous for it to be used as a highway for commerce.

### ***Historical Descriptions***

The *Fuller Report* establishes that around the time of Arizona’s statehood, the Verde River “flooded regularly.” *Fuller Report*, Exec. Sum. at iii. For example, in his 1870 published report on the health and sanitation of Fort McDowell and Camp Verde, the Surgeon General of the Army declared that “[t]he spring rains occur during March, and, with the snow on the mountains, usually occasion floods, which inundate many of the bottom lands; similar floods are an accompaniment of the July rains. . . .” *Id.*, at 3-12. Echoing the surgeon general’s description, the wife of the surgeon at the Rio Verde Indian Agency described the conditions as they existed in 1874: “Rains fell in March and July, and, together with melting snow from the mountains, often caused a sudden rise of many feet in the river, which than became a raging

torrent, carrying along great trees and large rocks.” Id., at 3-13. A year later the surgeon himself stated that he

‘had seen the Verde suddenly come raging down, tearing away everything before it – great trees and even rocks tossed about like so much straw. On one trip, while crossing a peaceful little stream, a wall of water and debris came out of nowhere and swept away most of our packtrain in the twinkling of an eye, and then in a few minutes subsided to a trickling stream.’

Id.

Historical accounts contained in the *Fuller Report* indicate that floods on the Verde were capable of “washing off the surface soil to the depth of 10 to 20 feet” and washing away acre upon acre of cultivated land “exposing to view a former channel of the river with a stone dam across it, which when first exposed was 4 feet higher than the old channel. . . .” Id. Describing the Verde’s proclivity for flooding in their 1920s study of the Verde River, archaeologists Winifred and Harold S. Gladwin concluded that the cultivable lands along its bed “are subject to sudden and violent floods owing to sharp declivity and the immense watershed drained by the river.” Id., at 3-15.

In contradistinction to these violent flood events, other historical accounts contained in the *Fuller Report* illustrate the fluctuating nature of the Verde in their descriptions of almost nonexistent flow. One resident wrote that the river “spread out wide” and was “so shallow you could cross it on clumps of grass.” Id., at 3-13. What little water there was in the river was “forced into standing pools,” which served as breeding grounds for mosquitoes. Id. Another contemporary wrote that “[t]he land was like a sponge and when it rained the water was absorbed into the ground immediately, so very little ran into the river channel and the small amount that did run into the river bed, stood in pools which became stagnant. . . .” Id., at 3-14.

The evidence before the Commission proves that the Verde River was far too unpredictable and unreliable to support trade or travel on the water and, thus, serve as a highway

for commerce. See Lykes Brothers, 821 F. Supp. at 1463 (explaining that for a watercourse to be navigable, “the water levels must be able to sustain commercial navigation on a *predictable and reliable* basis”) (emphasis added); Gollatte v. Harrell, 731 F. Supp. 453, 459 (S.D. Ala. 1989) (stating that “[t]he condition of the watercourse should be such as to ordinarily assure *regularity and predictability of usage*”) (emphasis added).

### ***United States Geological Survey***

After exploring Nevada and Arizona in the late nineteenth century at the request of the United States government, George M. Wheeler submitted a report to Congress, which contained a record of his observations concerning the region’s various resources.<sup>6</sup> See Littlefield Report, at 113. Wheeler’s pessimism regarding the navigability of the region’s watercourses is made clear in the following statement:

‘River transportation upon our western coast is, to a great extent, a failure, as beyond the Columbia and Colorado Rivers, that furnish somewhat irregular avenues of connection with the interior, no streams of considerable magnitude exist; river transportation, even in this very American age, loses its great power when pitted against railroads.’

Id., at 114.

Annual reports published by the U.S.G.S. in the 1890s also portrayed the Verde River as an erratic, non-navigable waterway with an unstable character. For example, the *Eleventh Annual Report of the United States Geological Survey* (1889-90) stated that the Gila basin, which includes the Verde, consists of

‘rivers most difficult and dangerous to examine and control. . . . [T]hese rivers show conditions . . . being [during spring and early summer] at their very lowest stages – even dry – and rising in sudden floods at the beginning of and during the winter. These floods are of the most destructive and violent character; the rate at which the water rises and increases in amount is astonishingly rapid, although the volume is not always great. . . . From this it is recognized that the onset of such a flood is terrific. Coming without warning, it catches logs and

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<sup>6</sup> Wheeler’s records are considered part of the records of predecessor agencies to the U.S.G.S. See Littlefield Report, at 113.

boulders [sic] in the bed, undermines the banks, and, tearing out trees and cutting sand-bars, is loaded with the mass of sand, gravel, and driftwood – most formidable weapons for destruction.’

*Littlefield Report*, at 114–115. Describing the Verde and other tributaries in the Gila basin, the *Twelfth Annual Report of the United States Geological Survey* (1890-91) stated that “[t]hese streams fluctuate greatly, being at times subject to sudden floods, especially during summer rains, when they often sweep out bridges, dams, and canal head works, while at other times they may diminish until the water almost disappears.” *Id.*, at 115. Finally, the *Nineteenth Annual Report of the United States Geological Survey* (1897-98) described the bed of the Verde River as being similar to that of the Gila River: “sandy and liable to change during a slight rise. . . .” *Id.*, at 116.

In addition to its annual reports, the U.S.G.S. published a series of Water Supply Papers (“WSPs”) in the early twentieth century that confirm the unreliable and erratic nature of the Verde River:

- WSP No. 66: Indicating that flow in the Verde River ranged from less than 100 cubic feet per second to more than 100,000 cubic feet per second. *See id.*, at 116.
- WSP No. 73: Describing the Verde River as “torrential in character,” its “flow dwindling at times to about 100 cubic feet per second, and at other times reaching a volume more than one hundred times as great. . . .” *Id.*, at 117.
- WSP No. 85: Explaining that the “channel [of the Verde River] is similar to that of Salt River – sandy and liable to change during a slight rise.” *Id.*
- WSP No. 100: Noting that “[t]he bed of the stream is composed of sand and is shifting.” *Id.*, at 117-18.
- WSP No. 269: Confirming that the bed of the Verde River is “sandy and shifting.” *Id.*, at 118.

Just prior to Arizona's statehood, the U.S.G.S. asked E.C. Murphy to examine data collected prior to February 14, 1912, and draft a report analyzing the potential for use of the Salt River and its tributaries to generate hydroelectric power. See id., at 119-20. Regarding the Verde, Murphy described the monthly flow of the river as being extremely variable. See id., at 120. The erratic and violent nature of the Verde River at that time is exemplified in Murphy's statement that "only a comparatively small part of the run-off can be utilized for power on account of the floods and long dry periods – one-fifteenth to one-fifth in the case of the Verde River[.]” Id., at 120.

#### ***United States Reclamation Service***

The wild and unpredictable nature of the Verde River was similarly observed by the United States Bureau of Reclamation in its *First Annual Report of the Reclamation Service, from June 17 to December 1, 1902*, which included the following comment regarding Arizona's tributary streams: "The sources from which water may be obtained for reclamation of arid lands in Arizona are, taken as a whole, the most erratic or irregular in the entire country. There are comparatively few rivers which flow throughout the year.” Id., at 122.

#### ***United States Office of Indian Affairs***

Because the United States Office of Indian Affairs was responsible for administering the Salt River Indian reservation and Camp McDowell Indian reservation – reservations through which the Verde River flowed – records from this agency are highly instructive as to how the Verde was viewed by those responsible for overseeing the development of water supplies for irrigation by the Tribes. See id., at 125. For example, in 1905, Indian Service Inspector W.H. Code observed that flooding had significantly eroded the Verde's banks and scoured its channel. See id., at 126. Later that same year, the Superintendent of Irrigation for the Office of Indian

Affairs described the fluctuating nature of the Verde's channel in the context of an irrigation survey being conducted at the Camp McDowell Indian reservation:

'The map shows the position of the river at the time the survey was made. It has, however, changed in course since. . . . When the survey was made the river had cut within about fifty feet of the canal in one place only, and that at an angle in the canal. I therefore cut a new canal about 700 feet long, thus straightening the old and removing the canal approximately 100 feet from the river. However the grade stakes were hardly set when the river again rose and cut away its bank until it approached to within ten feet of the canal in one place, and in no place for a distance of about 3000 feet is the river more than 50 feet from the canal.'

Id., at 126. Four months later, the farmer in charge of the reservation characterized the torrential nature of the Verde River as follows: "The Verde River . . . is a mountain stream which becomes a raging flood with every freshet, washing away the embankment at every arroyo and filling the [Indians'] ditch with sand. This is apt to occur both in the rainy season in summer and also during the winter.'" Id., at 127.

As illustrated in letter from the Superintendent of Irrigation some three and one-half years later, the Verde's vacillating nature continued to destroy large sections of irrigable land around the time of Arizona's statehood. In response to this problem, he recommended that "[a]ny general scheme of reclamation for the McDowell Indians should also provide for control of the Verde River.'" Id. According to the superintendent, the bed of the river

'flows through a flat of sand and gravel bars, from one-half to three-quarters of a mile in width, bordered by cut banks from five to twenty feet high. It swings from one side of the flat to the other, and where it impinges against a cut bank, is continuously eroding away the land.'

Id.

Finally, less than two years prior to Arizona being admitted into the Union, another official of the United States Office of Indian Affairs opined that the "water proposition [at Camp McDowell] under existing conditions is a very unsafe one.'" Id., at 128. He attributed this to the

erratic nature of the river, which is characterized by a main channel that shifts from side to side in response to flood events. See id.

In summary, U.S.G.S., Reclamation Service, and United States Office of Indian Affairs records consistently portrayed the Verde River as an extremely unpredictable, erratic, and unreliable stream wholly unsuitable for navigation. This characterization of the Verde is confirmed by an analysis of its geomorphologic characteristics.

## **2. Geomorphologic Characteristics**

Dr. Stanley Schumm thoroughly analyzed the geomorphology of the lower Verde River in the *Schumm Report*, and concluded that the morphologic character of the river and the dynamics of its channel rendered it not navigable as of Arizona's statehood. See Schumm Report, at 14. Dr. Schumm characterized the Verde as a braided Pattern 5 river with "a high width-depth ratio and relatively steep gradient, as a result of high bed load and large floods, which produce a relatively unstable pattern and a relatively variable channel in time and location." See id., at 2. Dr. Schumm concluded that high flow rates in 1889–1991, 1905–1907, and 1909 resulted in a "dramatic" widening of the Verde River's channel. See id., at 8. "This undoubtedly was the condition of the channel in 1912. . . ." Id. In addition, Dr. Schumm opined that the photographs and longitudinal profiles he analyzed indicate that the variability of the river's channel can also be attributed to the effects of bedrock and tributaries. See id., at 14. The result of these various influences on the Verde is a wide, shallow, and steep river – conditions "not conducive to navigation." Id. Based on these morphologic characteristics, Dr. Schumm concluded the following regarding the Verde's suitability for navigation: "The marked changes of valley width cause dramatic alterations of water depth and velocity, which would make navigation hazardous. The numerous rapids clearly prevent navigation, and the bedrock that controls the Verde and Salt Rivers at their confluence prevents navigation upstream on both rivers." Id.

Statements made in the *Fuller Report* and by Phil Pearthree at the January 18, 2006 hearing support Dr. Schumm's conclusions regarding the effects of flooding on the Verde's channel. For example, the *Fuller Report* states that the positions of low-flow channels have changed substantially through the past century *as a result of flood events*. See Fuller Report, at 5-24. According to the report, "[s]ubstantial changes in the positions of the banks of flood channels have dictated changes in the areas within which the low-flow channels can flow." Id. See also id., at 3-22 (explaining that floods on the Verde River "caused dramatic increases in water levels" and "eroded channel banks"). Mr. Pearthree supported Dr. Schumm's conclusions with his testimony that "the Verde is a variable floodplain" and in its alluvial reaches, "the position of the low-flow channel changes after every flood." (Tr. at 24, 26-27.) Mr. Pearthree explained that "[f]loods modify the flood channels and they modify the low-flow channels and you can expect that the low-flow channels will change position during large floods – or after large floods because they're basically reworked and they reestablish after the floods." (Tr. at 27.)

### **III. Conclusion**

"Navigable" has a precise legal definition. Arizona's navigability statutes require the Commission to be convinced by a preponderance of the evidence that "trade and travel were or could have been conducted . . . on water." A.R.S. § 37-1101(5). On or around February 14, 1912, the Verde River lacked sufficient, reliable streamflows to support either trade or travel on water. No probative evidence was presented to the Commission that either trade or travel took place on the waters of the Verde River at the time of Arizona's statehood. This "manifest unsuitability for navigation," combined with "lack of substantial evidence" that the Verde was ever used for navigation, leads to the logical conclusion that the river was never used and was never susceptible to being used as a highway for commerce. See Muckleshoot Indian Tribe v. Federal Energy Regulatory Commission, 993 F.2d 1428, 1433 (9th Cir. 1993) (holding river to



be non-navigable because amount and reliability of evidence proffered by proponents of navigability “pale[d] in comparison to the navigability evidence” other courts found to be determinative in comparable cases). The overwhelming weight of evidence offered prior to and during the January 18 hearing proves that the Verde River fails to meet the statutory definition of “navigability.” Accordingly, Phelps Dodge asks the Commission to find that the Verde River was not navigable as of February 14, 1912.

RESPECTFULLY SUBMITTED this 21<sup>st</sup> day of March, 2006.

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AND one copy MAILED this 21<sup>st</sup> day of  
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A handwritten signature in cursive script, appearing to read "Joe P. Sparks", is written over a horizontal line.

**EXHIBIT "A"**

**(Slides of the Verde River Offered by Jim Slingluff)**

# Slingluff Exhibit 5



# Slingluff Exhibit 6



# Slingluff Exhibit 8



# Slingluff Exhibit 11



# Slingluff Exhibit 21





# Slingluff Exhibit 35

