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**BEFORE THE ARIZONA NAVIGABLE STREAM ADJUDICATION COMMISSION**

**IN THE MATTER OF THE )  
NAVIGABILITY OF THE SANTA )  
CRUZ RIVER )**

**MEMORANDUM  
SUBMITTED FOR HEARING  
MARCH 11, 2003**

Phelps Dodge Corporation (“Phelps Dodge”) presents this memorandum to be considered at the March 11, 2003 public hearing regarding the navigability of the Santa Cruz River. See A.R.S. § 37-1126; Ariz. Admin. Code R12-17-106.3 (Draft, Nov. 24, 2002). Phelps Dodge requests that the Arizona Navigable Stream Adjudication Commission (“ANSAC” or “Commission”) determine that the Santa Cruz River is not navigable as that term is defined in A.R.S. § 37-1101(5). As set forth in detail below, the evidence submitted to date simply does not support 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 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 Ctr. for Law in the Public Interest v. 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); Defenders, 199 Ariz. at 426, 18 P.3d at 727; see id., 199 Ariz. at 419, 18 P.3d at 730 (quoting 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. Characteristics that support a finding of navigability include use of a river for commercial purposes, recreational boating, and log flotation. See id. On the other hand, characteristics that support a finding of non-navigability include flow only in response to rain, and transportation by other means in close proximity to the river. See id. While none of these characteristics is dispositive, the Commission may consider them as relevant to its ultimate determination of navigability for purposes of the State's title to the riverbed.

ANSAC is charged with gathering and considering evidence of these and other relevant characteristics of a river at the time of Arizona's statehood in order 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). Mere anecdotal examples are insufficient to

carry this evidentiary burden. See Estate of Harber, 102 Ariz. 285, 294 (1967) (“Mere . . . speculation [is] no substitute for evidence); see also United States v. Playboy Entertainment Group, Inc., 529 U.S. 803, 822 (2000) (“[T]he Government must present more than anecdote and supposition” to withstand a First Amendment challenge).

## **II. Evidence Regarding the Santa Cruz River Does Not Meet the Statutory Definition of a Navigable River.**

With respect to the Santa Cruz River, the evidence provided to the Commission before this hearing fails to satisfy the statutory test for a navigable river. The largest and most compelling documentary evidence is a 1996 report by the Arizona State Land Department titled “Arizona Stream Navigability Study for the Santa Cruz River” (hereinafter “Final SLD Report”).<sup>1</sup> Another significant document already admitted into evidence is Leonard C. Halpenny and Philip C. Halpenny’s report titled “Review of the Hydrogeology of the Santa Cruz Basin in the Vicinity of the Santa Cruz-Pima County Line” (hereinafter “Halpenny Report”).<sup>2</sup> All of the evidence in these reports, when analyzed according to the relevant navigability characteristics, demonstrates that Santa Cruz River was not navigable on February 12, 1914.

The Santa Cruz River flows north from the United States-Mexico border through Santa Cruz and Pima Counties and ends in Pinal County. Of these three portions of the river, the flow has been most consistent in the upper Santa Cruz River located in Santa

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<sup>1</sup> The Final SLD Report was submitted to the Commission on August 13, 1997 and is numbered “97-004-002 Santa Cruz River.” The Commission may consider the Final SLD Report without having it readmitted into evidence. See Ariz. Admin. Code R12-17-106.01(C) (Draft, Nov. 24, 2002). See also Laws 2001, Ch. 166, Sec. 1(B) (“The legislature intends that the commission may use the evidence produced and gathered to date . . .”).

<sup>2</sup> The Halpenny Report was received by the Commission on December 16, 1997, and is numbered “97-004-003 Santa Cruz River.”

Cruz County. Around the time of Arizona's statehood, flows reached the Gila River as rarely as once every fifteen years. See Final SLD Report, Exec. Summary, p. 4. For this reason, and because the March 11, 2003 hearing concerns the river's navigability within Santa Cruz County, this memorandum focuses on characteristics of the upper Santa Cruz River at the time of statehood.

A. **Streamflows in the Upper Santa Cruz River Were Too Low for Water Trade or Transportation**

Arid watercourses that flow only in direct response to precipitation are not navigable. See *Oklahoma v. Texas*, 258 U.S. 574 (1922). This portion of the Santa Cruz, even when flowing in response to rain, did not and would not have supported trade or transportation between the Mexican border and Tucson. Decades before statehood, the upper Santa Cruz River flowed perennially as far as Tubac. See Final SLD Report, Sec. 1, p. 8. Visitors to the area during the nineteenth century consistently reported that the river disappeared in certain places, such as north of Tubac. See Final SLD Report, Sec. 3, pp. 10-12; Halpenny Report, pp. 3-1 to 3-4. By 1913, one year after statehood, stream data indicate that the upper Santa Cruz River "was no longer perennial." See Final SLD Report, Sec. 1, p. 8; Final SLD Report, Sec. 4, p. ii. No later than 1910, farmers routinely diverted the entire flow of the Santa Cruz river first at Nogales and then at Tucson. See Final SLD Report, Sec. 3, p. 2; Final SLD Report, Sec. 3, p. 2; Final SLD Report, Sec. 3, p. 61.<sup>3</sup>

The measured discharges and corresponding heights of water in the river around the time of statehood simply were insufficient to support the level of activity statutorily required for a determination that the Santa Cruz River was navigable. Within two

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<sup>3</sup> These diversion practices appear to have continued and expanded the irrigation methods practiced by native populations. See Final SLD Report, Sec. 1, p. 28.

years of statehood, discharges at Nogales averaged 15 cubic feet per second (“cfs”), and ranged from 35 cfs to 174 cfs in response to rain. See Final SLD Report, Sec. 1, p. 8. According to stage-discharge curves used to estimate water heights, a 15 cfs discharge in the early 1900s would have brought the height of the river to approximately one-third of a foot at Nogales, and one-fifth of a foot at Tucson. See Final SLD Report, Sec. 4, p. 94. A 100 cfs discharge would have generated approximately one foot of water in the river at Nogales and three-quarters of a foot of water at Tucson. See id. Accordingly, even the most dependably flowing portions of the Santa Cruz River did not contain enough water to be susceptible to trade or transportation.

**B. Trade Was Not Conducted on the Santa Cruz River Itself.**

Consistent with the evidence of low streamflows, there is no evidence that trade was conducted on or could have been conducted on the Santa Cruz River itself. “There is no evidence of commercial trade on the river” by Hohokam or O’Odham people. Final SLD Report, Exec. Summary, p. 11. Although fish lived in some portions of the Santa Cruz River, there was no commercial fishing, and any methods of recreational fishing are not documented. See Final SLD Report, Sec. 6, p. 4-5; Final SLD Report, Sec. 6, p. 7. There is no evidence that non-Indian settlers used the river “to transport goods such as logs.” Final SLD Report, Exec. Summary, p. 6. Ferry service was not found anywhere on the Santa Cruz River, even during flood episodes. See Final SLD Report, Exec. Summary, p. 6. The Final SLD Report describes settlers’ reliance upon the Santa Cruz River’s “waters, food and forage” as they traveled *alongside* the river. Final SLD Report, Exec. Summary, p. 11; Final SLD Report, Section 6, p. 6. However, there is no evidence that trade or transportation

occurred on the river itself, as the definition of navigability requires. See A.R.S. § 37-1101(5).

**C. Transportation on the River Itself Was Impossible.**

The Santa Cruz River has never been used for water-borne transportation. Actual navigation of the Santa Cruz River happened only in isolated instances and under exceptional circumstances such as floods or artificial impoundment of the river's flow. See Final SLD Report, Sec. 3, pp. 61-63. The Hohokam and O'odham people do not appear to have used boats at any time. See Final SLD Report, Exec. Summary, p. 11. Despite extensive archaeological study, there has been "no archaeological evidence of navigation along the Santa Cruz River." Final SLD Report, Sec. 2, p. 30.

Accounts of pre-statehood navigation of the river itself by non-Indians are unreliable at best. There is a disputed story that the area that came to be known as "La Canoa" derives its name from a Mexican settler's crossing of the upper Santa Cruz River during a flood in a canoe. See Final SLD Report, Exec. Summary at 6. A much more dubious claim was made in the 1880s by a "land speculator" who advertised steamboats plying the river near his holdings at modern-day Rio Rico; however this is acknowledged to be a misrepresentation of the river's ability to support navigation. See Final SLD Report, Exec. Summary, p. 5.

Decades before Arizona's statehood, impoundment of the Santa Cruz River near Tucson created opportunities for recreational boating on and downstream of Silver Lake. See Final SLD Report, Exec. Summary, p. 5. However, the dam was destroyed by floods in the year 1900. See id.

Flood episodes were and continue to be the only opportunities to use boats on the Santa Cruz River. A flood in 1914 prompted an unsuccessful effort to boat along the upper Santa Cruz. See Final SLD Report, Exec. Summary, p. 5. "The boat was later located buried in the mud." Final SLD Report, Exec. Summary, p. 5. The flood generated currents strong enough at Sahuarita to make the rescue of stranded people by boat impossible. See id.

Accordingly, the Santa Cruz River cannot be considered navigable under the statutory test when transportation on the river itself was possible only during unpredictable flood episodes or as a result of impoundments, such as the dam that created Silver Lake, but which ceased to exist prior to February 14, 1912.

### **III. Conclusion**

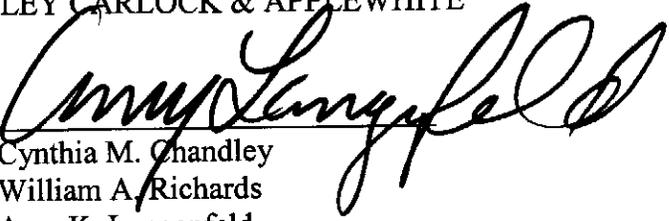
The evidence collected prior to the March 11, 2003 hearing points to the Santa Cruz River's significance as a resource for settlers of an arid country. However, this significance falls far short of proving that the Santa Cruz River was navigable for purposes of title to its bed and banks. The benefits that the Santa Cruz River provided at the time of Arizona's statehood are not in question. The Commission's inquiry is whether the Santa Cruz River is navigable. "Navigable" has a precise legal definition. Arizona's navigability statutes require this 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). As discussed above, the Santa Cruz River, even in its upper reaches, lacked sufficient streamflows to support either trade or travel on water, and, not surprisingly, the State Land Department found no evidence that either trade or travel took place on the waters of the Santa Cruz River. Evidence of activities along the Santa Cruz River fails to meet the statutory

definition of "navigability." Therefore, Phelps Dodge requests that the Commission find the Santa Cruz non-navigable.

RESPECTFULLY SUBMITTED this 14<sup>th</sup> day of March, 2003.

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Original and six copies HAND DELIVERED

this March 11, 2003, to

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