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14 **BEFORE THE ARIZONA NAVIGABLE STREAM**
15 **ADJUDICATION COMMISSION**

16 IN THE MATTER OF THE
NAVIGABILITY OF THE SALT
17 RIVER

Nos. 03-005 and 4-008-NAV
(Consolidated)

18 **FREEPORT MINERALS**
19 **CORPORATION'S OPENING**
20 **POST-HEARING**
21 **MEMORANDUM CONCERNING**
22 **THE NON-NAVIGABILITY OF**
23 **THE SALT RIVER**

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1 INTRODUCTION

2 Freeport Minerals Corporation (Freeport) respectfully submits its Opening Post-
3 Hearing Memorandum Concerning the Non-Navigability of the Salt River. As during the
4 hearing, Freeport’s focus in this brief is on the Upper Salt River, which runs from the
5 headwaters to Roosevelt Dam. The Upper Salt River consists of Segments 1 through 3 as
6 delineated by the Arizona State Land Department (“ASLD”) and evaluated by the parties.
7 All parties, including the ALSA, agree that Segment 1 is not navigable. As described in
8 detail below, the evidence overwhelmingly establishes that Segment 2 (Apache Falls to
9 Sleeper Rapid) and Segment 3 (Sleeper Rapid to Roosevelt Dam) were also non-navigable
10 in their ordinary and natural condition at and before the time of statehood.¹

11 As with the proceedings on remand concerning the San Pedro River, the Santa Cruz
12 River, the Gila River, and the Verde River, the parties advocating that the Salt River was
13 navigable in its ordinary and natural condition rest their case upon erroneous standards for
14 navigability. Specifically, these parties rely upon modern recreational boating standards to
15 support their arguments that any stream with depths of 6 inches is navigable for purposes of
16 title. These parties build their cases upon modern recreational boats and modern
17 recreational boating. By choosing to ignore “the kinds of commercial use that, as a realistic
18 matter, might have occurred at the time of statehood,” as a matter of law these parties fail to
19 meet their burden of proof. *PPL Montana v. Montana*, 132 S.Ct. 1215, 1233 (2012).

20 Indeed, the Upper Salt River is where the proponents’ misplaced reliance on modern
21 recreational boating has reached its zenith. The characteristics that make the Upper Salt
22 enjoyable for modern recreationalists in modern durable plastic craft – pervasive rapids and
23 boulders that would pulverize traditional wooden craft – are the very reasons why the river
24 was not susceptible to navigation for commercial purposes in the craft used to conduct

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26 ¹ While Freeport’s focus is on the Upper Salt River, the proponents of navigability have
27 failed to demonstrate that any segment of the Salt River is navigable for purposes of title.
28 The non-navigability of the other segments of the Salt River will be addressed in post-
hearing briefing submitted by the other parties opposing the ASLD’s claim to title the lands
below the high-water mark of the Salt River.

1 commerce in Arizona *circa* 1912.

2 The absence of historic boating of these segments is telling, where there were a
3 multitude of needs, including mining, military, and early settlement, that could have been
4 served by commercial navigation if the Upper Salt River had been navigable in fact.
5 Applying the standard for navigability that is well-established through longstanding United
6 States Supreme Court precedent, the evidence presented to ANSAC requires a determination
7 that the Upper Salt River was neither navigable nor susceptible to navigation in its ordinary
8 and natural condition.

9 **I. THE APPLICABLE LEGAL STANDARD MANDATES A FINDING THAT**
10 **THE SALT RIVER IS NOT NAVIGABLE.**

11 **A. Legal Standard.**

12 The proponents of navigability for the Salt River bear the burden of proof and must
13 demonstrate by a preponderance of the evidence that specific segments of the river were
14 navigable in their ordinary and natural condition. *State ex rel. Winkleman v. Arizona*
15 *Navigable Stream Adjudication Comm'n* (“*Winkleman*”), 224 Ariz. 230, 239, ¶ 17 (App.
16 2010). The river must be considered both in its “ordinary condition,” *e.g.* absent extreme
17 drought or flooding, and in its “natural condition,” *e.g.* absent human diversions. *Id.* at 241,
18 ¶ 28. Evidence from a time before modern-era settlement and farming began having a
19 substantial impact on the river is considered the best evidence of the river’s natural
20 condition. *Id.* at 242, ¶ 30. “Assuming the evidence has indicia of reliability,” however,
21 “the determination of the relevance and weight to be afforded the evidence is generally for
22 ANSAC to make.” *Id.* at 243, ¶ 31.

23 The test of navigability for title is a federal test based on more than 150 years of case
24 law. *PPL Montana*, 132 S.Ct. at 1227. The most important of these cases were decided by
25 the United States Supreme Court, beginning with *The Daniel Ball*, 77 U.S. 557 (1870).
26 Although *The Daniel Ball* addressed federal power to regulate navigation, its statement of
27 the test of navigability has become the standard test for purposes of navigability for title.
28 *See PPL Montana*, 132 S.Ct. at 1228. In fact, Arizona’s statutory definition of a navigable

1 waterway paraphrases *The Daniel Ball* test:

2 “Navigable” or “navigable watercourse” means a watercourse that was in
3 existence on February 14, 1912, and at that time was used or was susceptible
4 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.

5 A.R.S. § 37-1101(5).

6 During the long history of Supreme Court consideration of this issue, several
7 important legal principles have become well-established. First, this test is one of
8 “navigability in fact.” *PPL Montana*, 132 S.Ct. at 1227. Accordingly, the focus is on
9 “rivers really navigable.” *Id.* (quoting *Shively v. Bowlby*, 152 U.S. 1, 31 (1894)).
10 Furthermore, it is “not every small creek in which a fishing skiff or gunning canoe can be
11 made to float at high water which is deemed navigable, but, in order to give it the character
12 of a navigable stream, it must be generally and commonly useful to some purpose of trade
13 or agriculture.” *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 698-99
14 (1898) (quoting *The Montello*, 20 Wall. 430, 442). On this basis, the Supreme Court
15 concluded that

16 [o]bviously, the Rio Grande within the limits of New Mexico is not a stream
17 over which in its ordinary condition trade and travel can be conducted in the
18 customary modes of trade and travel on water. Its use for any purposes of
transportation has been and is exceptional, and only in times of temporary
high water.

19 *Id.* at 699. The Rio Grande is the largest and longest river in New Mexico, flowing from the
20 northern border with Colorado to the southern border with Texas. Yet, because it is a desert
21 river with insufficient reliable flows, the Supreme Court held that the entire river in New
22 Mexico is non-navigable.

23 Similarly, the Supreme Court concluded that the entire length of the Red River in the
24 State of Oklahoma, more than 500 miles in all, was non-navigable due to variable water
25 flows and river bed conditions, such that

26 trade and travel neither do nor can move over that part of the river, in its
27 natural and ordinary condition, according to the modes of trade and travel
28 customary on water; in other words, that it is neither used, nor susceptible of
being used, in its natural and ordinary condition as a highway for commerce.
Its characteristics are such that its use for transportation has been and must be

1 exceptional, and confined to the irregular and short periods of temporary high
2 water. A greater capacity for practical and beneficial use in commerce is
essential to establish navigability.

3 *Id.* at 591.

4 Most recently, the Supreme Court has reconfirmed that evidence of navigability
5 “must be confined to that which shows the river could sustain the kinds of commercial use
6 that, as a realistic matter, might have occurred at the time of statehood.” *PPL Montana*, 132
7 S.Ct. at 1233. Moreover, “[n]avigability must be assessed as of the time of statehood, and it
8 concerns the river’s usefulness for ‘trade and travel,’ rather than for other purposes.” *Id.*
9 For these reasons, “[m]ere use by initial explorers or trappers, who may have dragged their
10 boats in or alongside the river despite its nonnavigability in order to avoid getting lost, or to
11 provide water for their horses and themselves, is not itself enough.” *Id.* Finally, the Court
12 stated that a finding of navigability must be founded on the kind of trade and travel on water
13 that constitutes “a **commercial** reality.” *PPL Montana*, 132 S.Ct. at 1234.²

14 Based on these standards, the Supreme Court rejected a lower court ruling that the
15 Madison River in Montana was navigable because the lower court had relied primarily on
16 evidence of modern-day recreational boating. While the Supreme Court noted that such
17 evidence could be considered, it would only support a finding of navigability if “[a]t a
18 minimum, ... the party seeking to use present-day evidence for title purposes” can show that
19 “(1) the watercraft are meaningfully similar to those in customary use for trade and travel at
20 the time of statehood; and (2) the river’s post-statehood condition is not materially different
21 from its physical condition at statehood.” *Id.* The Court noted that these requirements are
22 critical because “[m]odern recreational fishing boats, including inflatable rafts and
23 lightweight canoes or kayaks, may be able to navigate water much more shallow or with
24 rockier beds than the boats customarily used for trade and travel at statehood.” *Id.*

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² Unless otherwise noted, emphasis is added.

1 **B. The Commission Already Applied The Appropriate Legal Standard In**
2 **Determining That The Upper Salt River Was Not Navigable In Its**
3 **Ordinary And Natural Condition.**

4 The Commission’s 2005 determination that the Lower Salt River was nonnavigable
5 was remanded for purposes of assessing the Lower Salt River in its natural condition.
6 *Winkleman*, 224 Ariz. at 242. However, with respect to the Upper Salt River, the
7 Commission already applied the appropriate legal standard in determining that the Upper
8 Salt River was not navigable in its ordinary and natural condition at statehood. In its
9 Report, Findings and Determination Regarding the Navigability of the Upper Salt River
10 dated December 13, 2007 (Report, Findings and Determination), the Commission made
11 clear that it was evaluating the Upper Salt in its ordinary and natural condition.³ The
12 Commission undertook an in-depth analysis of the relevant facts concerning the Upper Salt
13 River’s natural condition prior to statehood. The Commission devoted a Section to
14 consideration of the evidence of “Prehistoric or Pre-Colombian Conditions on the Upper
15 Salt River Watershed,”⁴ in which the Commission recognized that “[t]here is no evidence in
16 the archeological record that would indicate that any of the prehistoric cultures located in
17 the study area used the Upper Salt River as a means of transportation by boat or other
18 watercraft and there has been no documented use of the River for commercial trade and
19 travel or for regular floatation of logs. All travel in the study area during this period was by
20 foot.”⁵

21 In Sections titled “Historic Development of the Upper Salt River Region” and
22 “Conditions Around Statehood: Opinions of Pioneers Who Lived or Traveled in the Area at
23 that Time,” the Commission documented its consideration of evidence concerning early
24 Spanish exploration in the 1500s (no use of boats on the Upper Salt) and Yavapai

25 ³ See, e.g., Report, Findings and Determination at pp. 47-50. In its Report, Findings and
26 Determination, the Commission evaluated reaches of the river downstream of Segment 3.
27 Segments 1-3 are equivalent to the “Upper Reach” as addressed in the Commission’s
28 Report, Findings and Determination. *Id.* at 5.

29 ⁴ Report, Findings and Determination at pp. 19-22.

30 ⁵ Report, Findings and Determination at p. 22.

1 inhabitation of the region at that same time (also no use of boats on the Upper Salt), travels
2 of missionaries through the region in the late 1600s and 1700s, the travels of trappers and
3 mountain men through the region in the early 1800s (“These mountain men generally rode
4 horseback or walked through the southwest and did not use canoes, rafts or other types of
5 boats on the Upper Salt River or other Arizona rivers except for the Colorado.”), followed
6 by early settlements, the establishment of several military posts beginning in the 1860s, and
7 the rise of mining activity in the area.⁶ As the Commission noted, “[u]p to statehood, all
8 travel in this area was by foot, horseback, mule or wagon and later by automobiles as the
9 road improved.”⁷

10 As documented in its Report, Findings and Determination, the Commission
11 considered a great deal of additional evidence bearing upon the Upper Salt River’s natural
12 and ordinary condition, and ultimately determined that the Upper Salt River “was not used
13 or susceptible of use as a highway for commerce over which trade and travel was or may be
14 conducted in the customary modes of trade and travel on water as of February 14, 1912.”⁸
15 This determination was made by properly applying *The Daniel Ball* test and in consideration
16 of the river in its ordinary and natural condition.

17 As summarized below, the evidence that has been presented to the Commission since
18 issuing its Report, Findings and Determination only strengthens the conclusion that the
19 Commission reached in 2007.

20 **II. MR. BURTELL HAS SIGNIFICANT EXPERTISE EVALUATING THE**
21 **NATURE AND OCCURRENCE OF SURFACE WATER IN ARIZONA**
22 **STREAMS.**

23 Freeport retained Rich Burtell, RG, to identify and compile available evidence
24 concerning the Upper Salt River and to evaluate whether it was navigable or susceptible to
25 navigation in its ordinary and natural state. Mr. Burtell prepared a declaration

26 ⁶ Report, Findings and Determination at pp. 22-37.

27 ⁷ Report, Findings and Determination at p. 29.

28 ⁸ Report, Findings and Determination at p. 65.

1 (Declaration)⁹ and testified in support of his findings that the Upper Salt River was not
2 navigable in its ordinary and natural condition on or before statehood.

3 Mr. Burtell's *Curriculum Vitae* is Attachment A to his Declaration. Mr. Burtell is a
4 Registered Geologist with a Masters of Science in Hydrology. Mr. Burtell has over twenty-
5 five years of experience as an environmental scientist dealing with a host of water and
6 environmental matters, and his experience and expertise extend to matters involving
7 geology, hydrology, and hydrogeology. Mr. Burtell worked at the Arizona Department of
8 Water Resources (ADWR) for twelve years. For the majority of his tenure, Mr. Burtell
9 served as the Manager of the Adjudications Section at ADWR. As Manager of the
10 Adjudications Section, Mr. Burtell was extensively involved in evaluating the nature and
11 occurrence of surface water in Arizona streams.

12 **III. THE UPPER SALT RIVER WAS NOT NAVIGABLE IN ITS ORDINARY
13 AND NATURAL CONDITION AT OR BEFORE STATEHOOD.**

14 **A. The Upper Salt River's Scant History Of Boating Demonstrates That It
15 Was Not Navigable In Its Ordinary And Natural Condition.**

16 **1. There Is No Evidence Of Navigation By Native Americans At Any
17 Time During Their Long History Of Occupation Of The Region.**

18 A variety of different Native American cultures have occupied the Salt River Valley
19 dating back to before 100 A.D.,¹⁰ and "archaeological studies in the upper Salt River area
20 have documented some 11,000 years of human use of the region."¹¹ Despite this long
21 history of inhabitation and use of the region, there is no evidence to suggest that any
22 prehistoric peoples ever used the Upper Salt River for boating of any kind.¹² As described
23 in the 2003 Upper Salt Report by the ASLD's primary witness, J.E. Fuller, "[a]lthough the

24 ⁹ Declaration of Rich Burtell on the Non-Navigability of the Upper Salt River at and Prior to
25 Statehood, dated July 2015, Exh. C021, Freeport 1 (Declaration).

26 ¹⁰ JE Fuller Hydrology & Geomorphology, Inc., Arizona Stream Navigability Study for the
27 Salt River: Granite Reef Dam to the Confluence of the White and Black Rivers (revised
28 June 2003), Exh. 27, (Fuller's 2003 Upper Salt Report) at 2-1, 2-11, 2-12, 2-16.

¹¹ Fuller's 2003 Upper Salt Report at 2-22.

¹² 10/22/15 Trans. 710:6-12 (Fuller).

1 archaeological data suggest few changes in the flow regime of the upper Salt River and little
2 in the way of agricultural diversions or impediments to navigation, archaeological research
3 has not documented any use of the river for commercial trade and travel or for any regular
4 flotation of logs.”¹³

5 This fact is uncontested, and consistent with findings already reached by this
6 Commission in its Report, Findings and Determination.¹⁴

7 The fact that the Native Americans did not use the Upper Salt River for boating of
8 any kind during the their long history in the region is compelling evidence that the Upper
9 Salt River was not susceptible to use as a highway of commerce in its ordinary and natural
10 condition.

11 **2. There Are Very Few Historic Accounts Of Boating On The Upper**
12 **Salt River.**

13 The Upper Salt’s history of downstream travel prior to the advent of modern durable
14 plastic boats is, to say the least, extremely limited.¹⁵ Mr. Fuller testified that the first
15 documented use of a boat in an account involving a carpenter named Logan, who
16 purportedly boated down the White and Salt Rivers to Hayden’s Ferry sometime prior to
17 1873.¹⁶ The relevance of this evidence in assessing navigability for title is undermined by

18 ¹³ Fuller’s 2003 Upper Salt Report at 2-1. In his 2015 testimony, Mr. Fuller alluded to
19 speculation about the potential use of a balsa wood boat in irrigation canals. Mr. Fuller
20 readily acknowledged that this was “speculation,” not evidence of boat use on any portion
21 of the Salt River. 10/22/15 Trans. 696:5-697:2 (Fuller).

22 ¹⁴ Report, Findings and Determination at p. 21 (“Although there is significant evidence of
23 prehistoric irrigation in the Tonto Basin and in the lower reach of the Upper Salt River,
24 there is no evidence whatsoever of the use of the Upper Salt River by prehistoric cultures for
25 boating or travel on the water. Nor is there any evidence of attempted floating of logs for
26 use in construction of pueblos. In prehistoric times all travel was almost exclusively by
27 foot.”).

28 ¹⁵ Declaration at Table 1. Mr. Burtell compiled information concerning few sparse historic
accounts in Table 1 to his Declaration. Several of the accounts involve the use of rafts, not
for travel up or down the river, but as ferries serving the functional equivalent of a bridge.
Others involved use of boats in conjunction with constructing Roosevelt Dam, not for
purposes of upstream or downstream travel.

¹⁶ C054, Tab 392, p. 42; 5/17/16 Trans. 4577:11-17. The Logan account is not tabulated in

1 the contention that Logan’s journey included the White River and Segment 1 of the Salt
2 River, both of which even Mr. Fuller acknowledges are non-navigable for purposes of title.
3 The reason Logan may have been able to get a boat down the White River, Segments 1
4 through 3, and further downstream all the way to Hayden’s Ferry is clear on the face of the
5 written account: the trip occurred during “a spring flood.”¹⁷ Mr. Fuller reconfirmed his
6 position on the White River and Segment 1, and agreed that the spring flood is what allowed
7 Logan to get downstream on these non-navigable reaches:

8 THE WITNESS: I do not think that the White River is navigable for title
9 purposes, nor do I think that for Segment 1.

10 BY MR. HOOD:

11 Q. Thank you, Mr. Fuller, and I understood you to be agreeing with me on that
12 point. We’re on the same page.

13 A. Yes, I agree, yes.

14 Q. So with respect to the spring flood issue, however significant that event
15 was in terms of the amount of water relative to typical, it allowed him, if we
16 take this account at face value, to traverse a nonnavigable White River and a
17 nonnavigable Segment 1; is that correct?

18 A. Correct.¹⁸

19 Simply put, accounts of boating during a flood are not indications of navigability for
20 purposes of title. *See, e.g., Winkleman*, 224 Ariz. at 241, ¶ 28; *Rio Grande Dam*, 174 U.S.
21 at 699.

22 The next account involves a failed log drive. As Mr. Fuller documented in his 2003
23 Upper Salt Report, “[i]n 1873 Charles Hayden attempted to float logs down the Salt River
24 and to establish a lumber mill in Tempe....”¹⁹ However, the party was unable to get the logs
25 downstream to their destination, and Hayden’s log drive was therefore appropriately

26 Table 1 to Mr. Burtell’s Declaration because the account had not yet been discovered at the
27 time Mr. Burtell submitted his Declaration.

28 ¹⁷ C054, Tab 392, p. 42.

¹⁸ 5/19/16 Trans. 5133:4-5135:10 (Fuller).

¹⁹ Fuller’s 2003 Upper Salt Report at 3-34.

1 declared a failure.²⁰ As described in the same publication that provides the Logan account,
2 the failed log drive caused Hayden to conclude “that logs would lodge in the canyons and
3 could only be floated when the river was in flood, but that at such times it would not be
4 possible to hold them by a boom in the river.”²¹

5 This failed log drive is so harmful to the notion that the Upper Salt is navigable that,
6 contrary to his prior representations that this account was an “attempt[] to float logs *down*
7 *the Salt River*,” Mr. Fuller now argues to the Commission that the trip occurred, not on the
8 Salt River, but on the White River or Black River.²²

9 The only other historic account(s) of downstream travel in the Upper Salt’s natural
10 condition – *i.e.* excluding instances of boating on Roosevelt Lake or in the backwater
11 created by construction of the dam²³ – involved a gentleman, or, perhaps gentlemen, named
12 Meadows. The historical record is unclear whether there were one or two trips by
13 “Meadows” in the 1880s. One of the accounts was made 26 years after the event was
14 purported to have occurred, and the passage of time and its impact on memory is likely the
15 reason that account indicated that the trip was conducted by Jim Meadows in 1883 as
16 opposed to John Meadows in 1885.

17 It is not merely the shared surname that indicate this was likely one trip versus two.
18 The details of the trips are very similar, including the stretch of river they covered (upstream
19 of Tonto Creek to Tempe) and the significant impediments to navigation that they both
20 faced. In each instance the boat struck rocks, and the party was forced to physically
21 dislodge the boat.²⁴

22
23 ²⁰ Fuller’s 2003 Upper Salt Report at 3-34.

24 ²¹ C054, Tab 392, pp. 42-43.

25 ²² 10/20/15 Trans. 202:8-206:9 (Fuller).

26 ²³ For instance, Mr. Fuller agreed that neither the Thorpe and Crawford account nor the
27 Ensign and Scott account involved boating the Upper Salt in its natural and ordinary
28 condition 11/18/15 Trans. 1238:8-1241:22 (Fuller).

²⁴ Declaration ¶ 25 and Table 1; 2/23/16 Trans. 2771:10-25 (Burtell); Fuller’s 2003 Upper
Salt Report at 3-34, 3-25, 3-36.

1 Mr. Fuller agreed that it is unclear whether these two accounts describe the same
2 Meadows trip.²⁵ Whether there were two Meadows trips or only one is less important than
3 the fact that the accounts describe significant impediments to navigation, becoming stopped
4 by rocks, upturned boats and loss of supplies, and the fear of death.²⁶ Moreover, it is likely
5 that the Meadows trip occurred during a time of high water, as the stream was described as
6 ranging from six to 20 feet deep.²⁷ As described, below, these depths are far outside of the
7 normal range of flow for the Upper Salt River. Such exceptional journeys at times of high
8 water are not evidence of navigability for purposes of title. *Rio Grande Dam*, 174 U.S. at
9 699 (the Rio Grande River is non-navigable because “[i]ts use for any purposes of
10 transportation has been and is exceptional, and only in times of temporary high water.”).

11 As Mr. Burtell opines, “[t]aken together,” these very limited historic accounts “do
12 not demonstrate that the Salt River above Roosevelt Dam was reliably used, or susceptible
13 to use, for trade or travel prior to statehood. There is simply no evidence of extensive or
14 continued use of the river at that time for commercial purposes.”²⁸

15 **B. The Upper Salt River Was Unable To Meet Significant Needs For**
16 **Commercial Navigation During Early Settlement Of The Watershed.**

17 While the absence of commercial navigation is not dispositive “where conditions of
18 exploration and settlement explain the infrequency or limited nature of such use,” *United*
19 *States v. Utah*, 283 U.S. 64, 82 (1931), there were clear needs to use the Upper Salt River as
20 a highway for commerce if it had been viable for such purposes.

21 As Mr. Burtell describes in his Declaration, the first non-Indian settlers in the Salt
22 River Valley were the military, miners, farmers and ranchers, and those involved in the

23 _____
24 ²⁵ 10/20/15 Trans. 221:1-224:8 (Burtell).

25 ²⁶ Declaration ¶ 25 and Table 1; 2/23/16 Trans. 2771:10-25 (Burtell); Fuller’s 2003 Upper
26 Salt Report at 3-34, 3-25, 3-36.

27 ²⁷ Fuller’s 2003 Upper Salt Report at 3-34, 3-25, 3-36.

28 ²⁸ Declaration ¶ 29. *See, e.g., Rio Grande Dam*, 174 U.S. at 698-99 (1898) (to be deemed
navigable a river “must be **generally and commonly** useful to some purpose of trade or
agriculture.”) (quoting *The Montello*, 20 Wall. at 442).

1 construction of Roosevelt Dam.²⁹ These settlers were engaged in activities that required the
2 transport of supplies and goods, and, in the unsettled West, they had to make good use of the
3 best available transportation resources. Despite these obvious needs for transportation of
4 goods and people, these early settlers did not use the Upper Salt for such purposes.

5 1. The Military.

6 In 1870, a military post eventually known as Fort Apache was established along the
7 White River near the headwaters of the Salt River. Fort Apache “was ‘of singular
8 importance to the Army’ due to its location between the domains of the Apaches and
9 Navajos.”³⁰

10 Supplying this singularly important military installation proved to be a significant
11 challenge and an extremely expensive undertaking.³¹ Initially, supplies were shipped
12 overland via Fort Whipple near Prescott, northeast to Show Low, and then south to Fort
13 Apache. This route required 268 miles of wagon travel, which was an extremely time-
14 consuming and expensive way to supply Fort Apache.³² Multiple alternative overland
15 supply routes were developed over the years to come, but the quality of the roads was poor
16 and the cost of shipment was high. Indeed, *it was more expensive to transport goods to Fort*
17 *Apache than any other location in Arizona.*³³

18 Maps showing these overland routes in relation to the Salt River are included as
19 Figures 3a and 3b to Mr. Burtell’s Declaration. It is readily apparent that, “[i]f the Salt
20 River had been a practical and reliable means of transportation at this time, the military
21 would have utilized it to supply Fort Apache rather than having to rely on the”
22 *unsatisfactory overland routes that the military was forced to use.*³⁴

23 The Salt River was ignored as a solution to the military’s significant transportation

24 ²⁹ Declaration ¶¶ 45-61.

25 ³⁰ Declaration ¶ 45 (*quoting Brandes, Frontier Military Posts of Arizona* (1960) pp. 10-11).

26 ³¹ Declaration ¶¶ 48-50.

27 ³² Declaration ¶ 48.

28 ³³ Declaration ¶¶ 48-50; 2/23/16 Trans. 2801 (Burtell).

³⁴ Declaration ¶¶ 48-50 and Figures 3a and 3b.

1 problems because the river was not susceptible to use as a highway of commerce.

2 **2. Miners.**

3 At the same time that the United States military was grappling with how to more
4 effectively supply Fort Apache, miners in the Globe District and McMillenville were
5 suffering from the poor overland transportation available to them prior to the arrival of the
6 railroad. It has been recounted that, with respect to the mines in the Globe District, “[t]he
7 single most serious factor affecting the cost of mining was transportation,” and that “[t]he
8 most serious drawback to copper mining was the difficulty of transportation and shipping
9 bullion out.” The miners experimented with a variety of different overland routes, but none
10 were remotely satisfactory until the introduction of the railroad in 1898.³⁵

11 Not only were the miners unable to use the Salt River to transport industrial supplies
12 in, or ore or bullion out, they were unable to use the Salt River to obtain crops and other
13 basic necessities needed to sustain their communities. “These communities, when they were
14 first established, they needed foodstuffs and supplies, and by this time, the railroad had
15 entered the Salt River Valley, I think, in Maricopa, so supplies were coming in from
16 California, but getting those supplies up to Globe and the miners was not a trivial matter.”
17 A variety of extremely difficult, extremely expensive overland wagon roads were instead
18 used for these purposes, and again the Salt River was ignored as a highway for commerce.
19 That is because the Salt River was not susceptible to such use.³⁶

20 **3. Early Settlers.**

21 At this same time, a number of early settlements were also established along or near
22 the Salt River. Indeed, in the 1880s and 1890s, at least six post offices were established at
23 settlements along or near the Salt River. The existence of post offices indicates the presence
24 of population centers. Like Fort Apache and the miners in McMillenville and the Globe
25

26 ³⁵ Declaration ¶¶ 51-55 (quoting Bigando, *Globe, Arizona, the Life and Times of a Western*
27 *Mining Town, 1864-1917* (1989) pp. 37-38, and Sain, *Miami, a History of the Miami Area,*
28 *Arizona* (1989) pp. 6-7, 9; 2/23/16 Trans. 2806:4-2812:6 (Burtell).

³⁶ Declaration ¶¶ 51-55; 2/23/16 Trans. 2807 (Burtell).

1 District, settlers in these communities relied upon overland travel for transportation of goods
2 and people, as there is no evidence of use of the Salt River to serve the commercial needs of
3 these settlers. The Salt River was not even suitable for purposes of transporting tangible
4 objects as light as letters and envelopes to or from these several post offices.³⁷

5 4. Construction Of Roosevelt Dam.

6 During the construction of Roosevelt Dam, many wagon roads were constructed for
7 purposes of hauling supplies and lumber. Lumber was cut and milled in the Sierra Ancha
8 Mountains and was then hauled overland, first south from the mountains and across the Salt
9 River near Livingston, and then west alongside the river until reaching the dam site. If
10 Segment 3 of the Salt River had been susceptible to use for downstream commerce, it
11 certainly would have been used for transporting this lumber rather than a cumbersome
12 overland wagon road running *directly alongside the river*. Yet another need went unmet by
13 the Salt River, undoubtedly a reflection of its inability to serve as a highway for
14 commerce.³⁸

15 C. Historic Accounts And Government Assessments Of The Upper Salt 16 River Reveal A River That Was Neither Navigable Nor Susceptible To Navigation In Its Natural And Ordinary Condition.

17 In 1865, the Arizona Territorial Legislature requested an appropriation from the
18 United States Congress to improve the navigability of the Colorado River, stating, in part, as
19 follows:

20 the Colorado River is the only navigable water in this Territory; that it is
21 navigable, in high stages of water, five hundred miles; that by the expenditure
22 of a small amount of money, it may be rendered navigable much higher up.
23 That portion of the river between Fort Yuma and Fort Mohave has a
24 changeable channel and is obstructed by boulders, snags, and sand bars
25 rendering the navigation difficult and dangerous; that the removal of said
26 obstructions would greatly facilitate the navigation of this part of the
27 river...that if navigation of said river is improved it will accommodate the
28 General Government and greatly increase and hasten the development of vast
mineral other resources of this Territory.³⁹

37 Declaration ¶¶ 56-58; 2806:4-2812:25 (Burtell).

38 Declaration ¶¶ 59-61; 2813:1-2816:17 (Burtell).

39 Declaration ¶ 41.

1 In addition, four cadastral surveys were conducted along Segment 3 of the Upper Salt
2 river in 1881 that also indicate that the Segment 3 was not navigable. General Land Office
3 surveyors were instructed to meander both banks of rivers that they deemed to be navigable.
4 Not one of the surveyors meandered both banks of the Salt River.⁴⁰ This is because,
5 consistent with the historic record that demonstrates that Segment 3 was unsuitable for
6 transporting logs, goods, or people, in the surveyors opinion Segment 3 was not navigable.

7 Finally, as the Commission noted in its Report, Findings and Determination,

8 [t]he Upper Salt River was not listed in or covered by the Rivers and Harbors
9 Act of 1899, which applies to navigable rivers and other navigable waters of
10 the United States and prohibits, among other things, bridges and other
11 obstacles being placed on the navigable rivers without consent of Congress. 33
12 U.S.C. § 401, *et seq.*; *Economy Light & Power Co. v. U.S.*, 256 U.S. 113, 41
13 S.Ct. 409, 65 L.Ed. 847 (1921).⁴¹

14 The Rivers and Harbors Act of 1899 explicitly prohibits the construction of a dam across
15 any navigable river without consent of Congress. 33 U.S.C. § 401. The Salt River was not
16 considered a navigable river, and Roosevelt Dam and several other dams were later
17 constructed across the river.

18 **D. Boulders And Rapids Were Natural Impediments To Navigating The**
19 **Upper Salt River In Its Ordinary And Natural Condition.**

20 In its ordinary and natural condition, the Upper Salt River is heavily laden with
21 rapids that run the gamut from Class I, all the way up to Class V. Indeed, at least 41 named
22 rapids have been mapped on the Upper Salt River upstream of Roosevelt Dam.⁴² In fact,
23 one of the ASLD's witnesses, a commercial outfitter named Alex Mickel, advertises that the
24 Upper Salt River has "[m]ore rapids per mile than any other Arizona river."⁴³

25 At least one of these rapids, the infamous Quartzite Falls, has claimed multiple

26 ⁴⁰ Declaration ¶¶ 42-43.

27 ⁴¹ Report, Findings and Determination at pp. 36-37.

28 ⁴² Declaration ¶¶ 63-68.

⁴³ 10/21/15 Trans. 420 (Mickel).

1 lives.⁴⁴

2 While the rapids in the Upper Salt are exciting to adventuresome recreationalists
3 journeying in modern recreational craft, they posed a serious impediment to commercial
4 trade and travel in the types of craft commonly used for those purposes *circa* 1912. This
5 self-evident fact is underscored by the nearly complete absence of any boating history on the
6 Upper Salt under ordinary conditions prior to the advent of modern durable craft. *See*
7 Section III.A.2., above.

8 Segment 2 of the Salt River is far and away the segment that is least susceptible to
9 navigation by historic wooden boats of any portion of any river to which the Arizona State
10 Land Department (ASLD) has claimed title under the Equal Footing Doctrine. Mr. Fuller
11 readily acknowledged that “Segment 2 has more significant rapids, which are more of an
12 issue for boating in a historic wooden craft, than any other segment of any river” in Arizona
13 that Mr. Fuller has opined is navigable.⁴⁵ Mr. Fuller also testified that multiple segments of
14 the Gila River and the Verde River that the Commission has already deemed to be non-
15 navigable are equally or more susceptible to navigation compared to Segment 3.

16 As Mr. Burtell described during his testimony, the finding that the San Juan River in
17 Utah is non-navigable provides a compelling basis for comparison to the Upper Salt River:

18 Q. So sticking with the San Juan and the Upper Salt, in both circumstances,
19 you had a relative dearth of historic use of those rivers using wooden craft,
20 right?

21 A. That’s right. The special master in Utah found few cases of use of the San
22 Juan River, and certainly, as I’ve testified, we don’t have evidence at all, I
23 don’t believe, of any boat use in Segment 2 or 1 -- historic boat use.

24 Q. And in both instances, we have current, present-day, modern recreation in
25 inflatable and in plastic kayaks and plastic canoes and so forth. Is that right?

26 A. That’s correct.

27 Q. In comparable -- comparable types of rapids?

28 A. Yes, certainly. And I think one could argue the class of rapids along the
Upper Salt is great, if not greater, than what’s witnessed on the San Juan.

⁴⁴ 5/19/16 Trans. 5128:8-5129:25 (Fuller).

⁴⁵ 5/19/16 Trans. 5128:8-17 (Fuller).

1 Q. And you sort of touch on that point in your paragraph 67 where the focus
2 there is Class I to II boulder gardens. And as you described and tabulated in
3 Table 4, there's lots of IIIs and IVs in the Upper Salt.

4 A. That's correct.

5 Q. Okay. And so in both instances, you've got rivers that are currently a lot of
6 fun for people in inflatables, rubber -- rubber kayaks, plastic canoes, those
7 sorts of things. But back in the time period when they had at their disposal
8 wooden craft, wooden canoes, rafts, these rivers were not used?

9 A. Not that we have any evidence of. Again, the historic record is -- Again, I
10 think with all the efforts the State Land Department and the other experts in
11 this case, I don't think we have any historic boating accounts in Segments 1
12 and 2, so there, obviously, is a disconnect between those historic boats and
13 modern boats.

14 Q. And there's no dispute about the difference in durability that is presented
15 from these modern -- modern materials that are currently used to build canoes
16 versus the wood that was used circa 1912?

17 A. Yeah. The -- and I think Mr. Gookin provided some very interesting
18 evidence just showing the nature of these modern plastics. I mean, these are
19 almost like airplane type of technology. I mean, these are very highly
20 engineered, very light, very, very strong boats that if you witness boats going
21 down the Verde River -- and YouTube has plenty of these pictures -- and
22 you're actually in the cockpit of the boat going on down, it -- rocks are
23 coming at you quick. And to strike one of those with a kayak or a raft versus
24 an old wooden boat, it's almost not even a comparable experience.⁴⁶

25 This testimony about the stark difference between conducting commerce in a wooden
26 boat in 1912 versus modern recreational boating in modern durable materials demonstrates
27 the disconnect between Mr. Fuller's views about what constitutes navigability versus *The*
28 *Daniel Ball* test. Mr. Fuller's opinions flow from his experience as a recreational boater,
which has demonstrated that these rapids may be traversed in modern recreational crafts
made from modern, durable materials. As Mr. Burtell observes, "[I]like the San Juan River,
the Upper Salt River is very popular among modern recreational boaters.... Its rapids are as
large, if not larger, its slopes are steeper ..., and, like the San Juan, it is characterized by
narrow canyons."⁴⁷ The rapids that are sought after by modern-day recreationalists render
the Upper Salt insusceptible to navigation using the craft commonly used for trade and
travel at statehood.

⁴⁶ 2/23/16 Trans. 2821:9-2823:11 (Burtell); see also Declaration ¶¶ 63-68.

⁴⁷ Declaration ¶ 68.

1 **E. Multi-Channel River Conditions Impeded The Ability To Boat Segment**
2 **3.**

3 Significant rapids exist in Segment 3, although they are not as prevalent in Segment 3
4 as they are in Segment 2. There is another impediment to navigation that, along with the
5 existence of boulder gardens, rapids, and low flows, explains why historic wooden boats
6 were not capable of using Segment 3 to conduct commerce. As he testified before the
7 Commission, Mr. Burtell “counted no less than about 14 locations within Segment 3 where
8 there was multichannels, where the river split either into two or more channels.” Because
9 the stream discharge is split among two more channels, stream depth is reduced, presenting
10 “yet another challenge for a boater who’s trying to haul either people or supplies, hitting a
11 stretch of the river that is now less flow, nothing -- for no -- for no cultural reason but
12 simply for a physical reason, that geomorphologically the river split.”⁴⁸ Even if one of the
13 multiple channels has sufficient flow, it is often difficult to determine which channel to
14 use.⁴⁹

15 Mr. Burtell elaborated as follows on how multichannel conditions impede navigation:

16 Q. And even with the reduction in the amount and severity of the rapids in
17 Segment 3, that’s the segment where we had these two or perhaps three
18 accounts where people still couldn’t get through. They got hung up on rocks
19 in one or two instances, depending on how you interpret those two accounts,
20 and Hayden had no luck getting the logs down in that segment.

21 A. That’s right. So obviously, Segment 3 presented enough of a challenge --
22 and I would say again, tying in the settlers and the miners in the Globe and
23 McMillenville area, if they were to come down to the river, they would hit the
24 river in Segment 3. And so you’ve got a pretty large population center that’s
25 close to the river in those areas that would have been staring at Segment 3. I
26 would think they may have a desire to go down to Tempe area and the
27 Phoenix area, and we just don’t have a record of them using the river. So why
28 is that? I think the shallow depths, not just where the river splits, but even
29 more so where the river splits, would have just caused another challenge for
30 them.⁵⁰

31 Combined with its rocky riverbed, rapids, and already low natural depths, these

32

⁴⁸ 2/23/16 Trans. 2826:7-2831:18 (Burtell); *see also* Declaration ¶¶ 69-72.

33 ⁴⁹ 10/21/15 Trans. 289 (Williams); 1/27/16 Trans. 2254 (Mussetter).

34 ⁵⁰ 2/23/16 Trans. 2826:7-2831:18 (Burtell); Declaration ¶¶ 69-72.

1 multichannel conditions explain why the significant populations that surrounded Segment 3
2 did not use it as a means of conducting trade or travel.

3 **F. The Upper Salt River Was A Generally Shallow Stream Not Susceptible**
4 **To Use As A Highway For Commerce.**

5 In order to assess the Upper Salt River's ordinary and natural streamflow, Mr. Burtell
6 performed a streamflow reconstruction to account for diversions and allow an assessment of
7 the river "absent the effects of man."⁵¹ Mr. Burtell reconstructed streamflow from three
8 USGS gages, using a period of record spanning from the late 1880s to 1940.⁵² He selected
9 this period because good stream flow data are available, it was a period that was neither
10 particularly wet nor particularly dry,⁵³ it was a period prior to substantial effects from well
11 pumpage, and because the amount of cultural diversions remained fairly constant.⁵⁴

12 As has become a theme in his evaluations of the San Pedro, Santa Cruz, Upper Gila,
13 Verde, and now the Upper Salt, Mr. Burtell's reconstruction was extremely conservative,
14 meaning that he erred on the side of adding too much water back into the stream. First, Mr.
15 Burtell assumed that a conservatively high volume of water was being diverted to irrigate
16 each cultivated acre, meaning he added more water into the stream than was ever diverted
17 from it. Also, some of the water that Mr. Burtell added back into the river through his
18 reconstruction was already measured by the gages because it was diverted water that
19 returned to the river as a return flow or spill water. This results in double counting that
20 results in conservatively high reconstructed depths. In its ordinary and natural condition,

21 ⁵¹ 2/23/16 Trans. 2838:19-2859:19 (Burtell); Declaration §§ VII and VIII. *See also*
22 *Winkleman*, 224 Ariz. at 241, ¶ 28.

23 ⁵² 2/23/16 Trans. 2838:19-2859:19 (Burtell); Declaration ¶¶ 77, 84.

24 ⁵³ On rebuttal, Mr. Fuller adopted Mr. Burtell's flow and depth reconstructions. He noted
25 that he thought the period of record might have been a little on the dry side, but nevertheless
26 agreed that the reconstruction yielded appropriate reconstructed depths. When presented
27 with Mr. Burtell's calculations, however, Mr. Fuller agree that Mr. Burtell's period of
28 record is actually wetter than the long term average at two of the three gages, and just
slightly drier than average at the other. 5/19/16 Trans. 5117:2-5121:8 (Fuller); C057,
Freeport 14.

⁵⁴ 3/30/15 Trans. 2675:5 – 2676:22 (Burtell).

1 the Upper Salt had less flow and lower depths.⁵⁵

2 Mr. Burtell's streamflow reconstruction results are tabulated in Table 7 to his
3 Declaration. The median reconstructed streamflows (*i.e.* Q50) range from less than 298
4 cubic feet per second (cfs) to less than 456 cfs, and the higher range of flows represented by
5 the 25% flow (*i.e.* Q25) range from less than 623 cfs to less than 977 cfs. These
6 reconstructed flows, representing a very conservative representation of the Upper Salt River
7 in its natural condition, pale in comparison to the levels of discharge associated with rivers
8 throughout the United States that have been deemed navigable.⁵⁶ The Upper Salt's natural
9 discharge is also significantly less than the discharge of streams that have been deemed
10 nonnavigable.⁵⁷ Quite simply, Mr. Burtell's reconstruction confirms what we all know: the
11 Upper Salt River is a relatively small, shallow desert stream that did not have enough
12 natural discharge to support commercial navigation.

13 From his reconstructed flows, Mr. Burtell was able to calculate associated depths.
14 Under median natural flow, the Upper Salt River ranged from less than 1.7 feet of average
15 depth near Chysotile, to a maximum depth between less than 1.6 to less than 2.3 feet at
16 Roosevelt.⁵⁸ For all of the same reasons, discussed above, that Mr. Burtell's streamflow
17 reconstruction results in greater flow than would have been found under natural conditions,
18 Mr. Burtell's depths are also conservatively overstated.

19 Moreover, Mr. Burtell's reconstructed depths correspond to measurements taken in
20 the vicinity of the gage stations. These measurements are taken near the edge of pools, not
21 in riffles or rapids, and they therefore do not reflect the shallow areas of the river that are the
22 limiting factor for navigation. Mr. Burtell prepared two cross-sections at riffles along the
23 Upper Salt to demonstrate "that it's not the pools that are limiting [to navigation]; it's the
24 rapids, the riffles, the bars, the shallow areas." Accordingly, Mr. Burtell set out to illustrate

25 _____
26 ⁵⁵ 2/23/16 Trans. 2838:19-2859:19 (Burtell); Declaration §§ VII and VIII.

27 ⁵⁶ See Information Regarding Navigability of Selected U.S. Watercourses, Exh. 017.

28 ⁵⁷ See Information Regarding Navigability of Selected U.S. Watercourses, Exh. 017.

⁵⁸ Declaration at Table 7; 2/23/16 Trans. 2838:19-2859:19 (Burtell).

1 “how much different the flow depth might be on a riffle than it would be elsewhere.” Under
2 conditions very close to the reconstructed median, Mr. Burtell’s cross-sections show an
3 average depth of 1.1 feet at the riffle in Segment 2 and 0.9 feet at the riffle in Segment 3.⁵⁹

4 The rapids, riffles, bars, and other shallow areas are what determine whether a river
5 is susceptible to use as a highway for commerce. At least 97 riffles have been mapped in
6 Segment 2, and at least 60 have been mapped in Segment 3. These mapped riffles are in
7 addition to the numerous rapids discussed above, and provide a further indication about why
8 the Upper Salt has never been susceptible to use as a highway for commerce.⁶⁰

9 Taking his extremely conservative depth figures and applying them to Supreme
10 Court precedent, Mr. Burtell concluded that, consistent with the other lines of evidence, the
11 Upper Salt was not susceptible to navigation as a highway for commerce. In the United
12 States’ seminal decision in the *Utah* case, the San Juan River was determined to be *non-*
13 *navigable* with depths between one and three feet “for 219 days” each year, and for the
14 other “146 days a depth of over three feet.”⁶¹ Even in the context of extremely conservative
15 flow reconstructions, the Upper Salt River was a minor stream in its ordinary and natural
16 condition, particularly in comparison to the much larger San Juan that was deemed non-
17 navigable by the United States Supreme Court.

18 The San Juan is but one useful point of comparison. While adopting Mr. Burtell’s
19 reconstructions for the Upper Salt River, Mr. Fuller also agreed that Mr. Burtell’s
20 reconstructed depths are very similar to his reconstructed depths for the Upper Gila and the
21 Verde – two rivers that the Commission has already deemed non-navigable.⁶²

22 In sum, Mr. Burtell’s flow and depth reconstructions are consistent with the several

23 ⁵⁹ 2/23/16 Trans. 2863:3-2869:15 (Burtell); Declaration ¶¶ 100-104 and Figure 7A
24 (photographs depicting gage locations relative to shallower riffle areas).

25 ⁶⁰ 2/23/16 Trans. 2863:3-2869:15 (Burtell); Declaration ¶¶ 100-104 and Figure 7A.

26 ⁶¹ 1930 Special Master’s Report, Item No. C018, Tab 213, at p. 167; *see also id.* at 169
27 (“[T]here is a depth of no more than 2 feet” five months per year and “at other times there
28 are places where the depth is less than 2 feet...”), and 180 (“The evidence as to depth makes
it clear that boats with a draft of two feet could navigate not more than half the year...”).

⁶² 5/17/16 Trans. 4735:16-4736:14 (Fuller); 5/19/16 Trans. 5125:24-5126:10 (Fuller).

1 other lines of evidence that Mr. Burtell evaluated that depict a stream that was not
2 susceptible to commercial navigation.

3 **IV. THE NAVIGABILITY PROPONENTS' ERR AS A MATTER OF LAW IN**
4 **THEIR RELIANCE UPON MODERN RECREATIONAL CRAFT AND**
5 **MODERN RECREATIONAL BOATING.**

6 The ASLD called Brad Dimock to testify about his boating experience in Arizona,
7 which centers squarely on the Colorado River. As was the case with respect to the Verde
8 River, Mr. Dimock's only experience boating the Upper Salt is limited to some kayaking in
9 modern polyethylene recreational craft and modern inflatable rafts. Most of these trips
10 occurred in the 1970s, and all at high water. He was unable to discuss specifics about any
11 rapids in the Upper Salt, and he was uncertain what kind of boat he would design for the
12 Upper Salt because he had only seen it at high water. He knew he would want it to be as
13 durable as possible for this rocky stream.⁶³

14 Most notable about Mr. Dimock's testimony was his very candid acknowledgment
15 that he would not take his historic replica boat, the Edith, on the Upper Salt.⁶⁴ Quite simply,
16 the Upper Salt's pervasive boulders and rapids would have pulverized a wooden boat under
17 ordinary and natural conditions.

18 The proponents of navigability rely principally on Mr. Fuller's testimony to support
19 their position that the Salt River is navigable under *The Daniel Ball* test. Mr. Fuller's
20 opinions are fundamentally flawed because he approaches navigability as merely a question
21 whether he can get a modern recreational craft downstream. Similarly, the ASLD also
22 called Tyler Williams and Mr. Mickel to testify about their recreational boating on the Salt
23 River in modern polyethylene kayaks and inflatable rafts.

24 Mr. Fuller rendered opinions based upon an erroneous standard, based on
25 recreational boating rather than commercial navigation. He evaluated navigability from the
26 perspective of the ability to float a modern recreational craft, rather than on the Upper Salt

27 ⁶³ 10/22/15 Trans. 543:14-550:5 (Dimock); C021 at Freeport 7 (3/31/15 Verde Trans.
28 2929:7 – 2931:7 (Dimock)).

⁶⁴ 5/19/16 Trans. 543:9-545:19 (Fuller).

1 River's susceptibility to use as a highway for commerce. Mr. Fuller based his opinions on
2 recreational boating standards, known as the Hyra method, which were developed by the
3 U.S. Fish & Wildlife Service in 1978 and his personal recreational experiences with modern
4 recreational craft, such as fiberglass kayaks and polyethylene canoes. Using his erroneous
5 recreational standard, Mr. Fuller contends that six inches of depth is sufficient to support a
6 finding of navigability:

7 **I'm using for the purposes of my testimony 6 inches as a minimum flow. I**
8 **personally have boated in depths that are less than that. But again, in my**
9 **mind, 6 inches is a nice minimum one ... at less than 6 inches, it becomes a**
10 **little less fun to paddle.** * * *

11 **When it comes to susceptibility, it's really all about the depth. If it's deep**
12 **enough to float a boat, it's susceptible to navigation....**⁶⁵

13 The ASLD called Mr. Williams and Mr. Mickel to provide similar testimony – that
14 they believe the Salt River to be navigable because they have personal experience boating it
15 in modern recreational craft, which are constructed of extremely durable materials and bear
16 little resemblance to the wooden craft used for commerce at the time of Arizona's statehood.
17 Mr. Williams' assessment of "navigability" is based on his recreational boating experiences
18 on a variety of Arizona watercourses, which are chronicled in his guidebook, *Paddling*
19 *Arizona, A Guide to Lakes, Rivers, and Creeks*. Mr. Williams does most of his boating in
20 polyethylene kayaks. If recreational paddling satisfied *The Daniel Ball* test, then something
21 on the order of 50-70 rivers in Arizona would be navigable for purposes of title, as Mr.
22 Williams guidebook and testimony reflect that he has paddled 50-70 rivers in Arizona in
23 plastic kayaks without difficulty.⁶⁶

24 Similarly, Mr. Mickel's experience on the Salt River is limited modern recreational
25 craft, not wooden boats that were used to conduct commerce circa 1912. As a commercial
26 outfitter, Mr. Mickel provided insight into the seasonal and variable nature of flows in the
27 Upper Salt, explaining that commercial trips on the Upper Salt typically are limited to the

28 ⁶⁵ C018, Tab 148 (6/16/14 Gila Trans. 42:5-17 and 61:14-15 (Fuller)); 11/17/15 Trans. 1212:7-1213:8 (Fuller).

⁶⁶ 10/21/15 Trans. 324:4-337:19 (Williams); Exhibit C049 at Freeport 13.

1 season between February or March and May or June season because the river's flows are
2 unpredictable, and the boating season can in fact be limited to March and early April
3 depending on the year. Mr. Mickel's experience on the Upper Salt is purely recreational
4 and is strictly limited to durable modern recreational craft.⁶⁷

5 In sum, these witnesses each base their opinions of susceptibility to navigation on the
6 ability to float modern recreational craft, as opposed to "the kinds of commercial use that, as
7 a realistic matter, might have occurred at the time of statehood." *PPL Montana v.*
8 *Montana*, 132 S.Ct. 1215, 1233 (2012).

9 Of course, *The Daniel Ball* test does not turn on whether the river has enough water
10 to float a modern recreational canoe. The navigability proponents' recreational standard for
11 navigability for title runs directly afoul of binding United States Supreme Court precedent,
12 including the recent decision in *PPL Montana* in which the Court unanimously rejected the
13 idea that evidence of modern recreational boating is sufficient to demonstrate navigability.
14 132 S. Ct. at 1234 (holding that "**present day recreational use of the river did not bear**
15 **on navigability,**" and that "**reliance upon the State's evidence of present-day,**
16 **recreational use,** at least without further inquiry, **was wrong as a matter of law.**"). The
17 Supreme Court expressly stated that it is evidence of susceptibility to *commercial* use that
18 must be considered in evaluating navigability. *Id.* at 1233 (holding that "**evidence must be**
19 **confined to that which shows the river could sustain the kinds of commercial use that,**
20 **as a realistic matter, might have occurred at the time of statehood.**"). In sum, the
21 inquiry is whether the Upper Salt River was susceptible in its ordinary and natural condition
22 to use as a highway of commerce, not whether a modern, light-weight recreational craft can
23 be floated on six inches of water.

24 The navigability proponents fail in their efforts to relate modern recreational boating
25 and modern recreational watercraft to the kinds of commercial activities and watercraft of
26 1912. The reality is that these modern recreational craft bear little resemblance to the craft
27

28 ⁶⁷ 10/21/15 Trans. 388, 405, 471-72 (Mickel).

1 customarily used for commercial purposes at the time of Arizona's statehood. *PPL*
2 *Montana*, 132 S.Ct. at 1234. While six inches to one foot of depth may be sufficient to float
3 some modern recreational craft, those depths are insufficient for engaging in meaningful
4 commerce using the watercraft commonly used for commercial purposes at statehood. This
5 is established through the complete absence of any commercial use of the Upper Salt River
6 despite a long history of occupation by people reliant upon the river.

7 Modern recreational craft are also significantly more durable than the craft used in
8 1912. This fact is uncontroverted.⁶⁸

9 Not only are these modern craft dissimilar to what was commonly used for trade and
10 travel at statehood, but the modern recreational activity for which they are used is a recent
11 phenomenon. In other words, recreational boating was not among the commercial uses that
12 realistically might have occurred at statehood. *See PPL Montana*, 132 S. Ct. at 1233. As
13 Mr. Fuller explained in his 1998 Final Report, *Criteria for Assessing Characteristics of*
14 *Navigability for Small Watercourses in Arizona*, "rivers were not generally used for
15 recreational travel until the development of new materials such as fiberglass and artificial
16 rubber after World War II," and commercial recreational rafting, which did not begin until
17 the 1930s, did not become common until the 1970s.⁶⁹ This timeline coincides with the
18 development of the Hyra method in 1978.

19 Notably, the introduction of the types of modern, durable, low-draw recreational
20 crafts that were not available at statehood was the primary driver behind the development of
21 recreational boating well after statehood:

22 The development of durable small boats – plastic, fiberglass and other modern
23 types of canoes and kayaks, inflatable boats for single paddlers and for groups
24 – all contributed to the rising popularity of river running in Arizona especially
25 because of low water.⁷⁰

26 ⁶⁸ 10/22/15 Trans. 624-25 (Fuller); 1998 Final Report, *Criteria for Assessing Characteristics*
27 *of Navigability for Small Watercourses in Arizona*, Item No. C021, Freeport 6, p. 32.

28 ⁶⁹ Item No. C021, Freeport 6, pp. 32-33.

⁷⁰ Item No. C021, Freeport 6, p. 32.

1 The United States Supreme Court addressed this circumstance squarely in *PPL*
2 *Montana*. In holding that the Montana Supreme Court erred in relying on evidence of
3 modern recreational boating, the United States Supreme Court recognized, as did Mr. Fuller
4 in his 1988 report, that “[m]odern recreational fishing boats, including inflatable rafts and
5 lightweight canoes or kayaks, may be able to navigate water much more shallow or with
6 rockier beds than the boats customarily used for trade and travel at statehood.” *PPL*
7 *Montana*, 132 S. Ct. at 1234.

8 In sum, the navigability proponents have erred as a matter of law by relying on
9 modern recreation craft and modern recreational boating. They have applied an erroneous
10 standard, and they have therefore failed to meet their burden of proof.

11 CONCLUSION

12 Not only have the navigability proponents failed to satisfy their burden of proof, but
13 the overwhelming weight of the evidence clearly demonstrates that the Upper Salt River
14 was neither navigable nor susceptible to navigation in its ordinary and natural condition at
15 or before statehood. The Upper Salt was never used as a highway for commerce in its
16 ordinary and natural condition despite the need for such a highway to supply military
17 installations and to support mining and early settlement. There were significant needs to use
18 the river, and the fact that inefficient and extremely expensive overland travel was used
19 instead confirms the other lines of evidence that demonstrate that the Upper Salt River was
20 not susceptible to commercial navigation in its ordinary and natural condition.

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RESPECTFULLY SUBMITTED this 18th day of July, 2016.

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Attorneys for Freeport Minerals
Corporation

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MAILING CERTIFICATE

ORIGINAL AND SIX COPIES of the foregoing
sent via U.S. mail for filing this 18th day of July, 2016 to:

Arizona Navigable Stream Adjudication Commission
1700 West Washington, Room B-54
Phoenix, AZ 85007

COPY sent via e-mail this 18th day of July, 2016 to:

George Mehnert
Director
nav.streams@ansac.az.gov

COPY sent via e-mail this 18th day of July, 2016 to each
party on the mailing list (see <http://www.ansac.az.gov/parties.asp>)
for *In re Determination of Navigability of the Salt River*

By: Kathy Power
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