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**BEFORE THE ARIZONA NAVIGABLE STREAM
ADJUDICATION COMMISSION**

IN THE MATTER OF THE
NAVIGABILITY OF THE SALT
RIVER

Nos. 03-005-NAV and 04-008-NAV
(Consolidated)

**FREEPORT MINERALS
CORPORATION'S PROPOSED
FINDINGS OF FACT AND
CONCLUSIONS OF LAW**

1 Freeport Minerals Corporation (Freeport) respectfully submits its proposed
2 findings of fact and conclusions of law in the matter of the navigability of the Salt River.
3 For the convenience of the Commission, an electronic Word copy of these proposed
4 findings of fact and conclusions of law is being transmitted to counsel for the Arizona
5 Navigable Stream Adjudication Commission.

6 **FINDINGS OF FACT**

7 Based upon the evidence in the record, the Commission makes the following
8 findings of fact:

9 **Summary of Evidence Submitted**

10 1. Pursuant to Title 37, Chapter 7 of the Arizona Revised Statutes, the
11 Commission has undertaken to consider relevant historical and scientific data and
12 documents and other evidence regarding the issue of whether the Salt River was navigable
13 or non-navigable for purposes of title as of February 14, 1912. A.R.S. §§ 37-1101 to -
14 1156.

15 2. The Commission has given proper public notice of its intent to review the
16 navigability or non-navigability of the Salt River in accordance with A.R.S. § 37-1123(B).
17 The Commission provided notice by mail to all those requesting individual notice and
18 provided notice by means of the Commission's website (<http://www.ansac.gov/>).

19 3. The Commission collected and documented all reasonably available
20 evidence regarding the navigability of the Salt River in response to the Notice of Intent to
21 Study and Receive, Review, and Consider Evidence. After collecting and documenting
22 the available evidence, the Commission scheduled public hearings to receive additional
23 evidence regarding the Salt.

24 4. Hearings were held by the Commission regarding the navigability or non-
25 navigability of the Salt River on October 20-23, 2015, November 17-19, 2015, January
26 26-29, 2016, February 23, 2016, March 10-11, 2016, March 30-31, 2016 and May 17-19,
27 2016.

28 5. The Commission made clear to the parties that it would consider all matters

1 presented to it at each hearing and that anyone who desired to appear and give testimony
2 at any public hearing could do so.

3 6. Freeport focused its presentation of evidence on the Upper Salt River, which
4 runs from the headwaters to Roosevelt Dam. The Upper Salt River consists of Segments
5 1 through 3 as delineated by the Arizona State Land Department (“ASLD”). All parties,
6 including the ASLD, agree that Segment 1 is non-navigable.

7 7. As delineated by the ASLD, Segment 2 starts at Apache Falls and ends at
8 Sleeper Rapid and Segment 3 starts at Sleeper Rapid and ends at Roosevelt Dam.

9 **Qualifications of Richard Burtell**

10 8. Freeport retained Richard Burtell, RG, to identify and compile available
11 evidence concerning the Upper Salt River and to evaluate whether it was navigable or
12 susceptible to navigation in its ordinary and natural state.

13 9. Mr. Burtell prepared a declaration and testified in support of his findings
14 that the Upper Salt was not navigable in its ordinary and natural condition on or before
15 statehood. Declaration of Rich Burtell on the Non-Navigability of the Upper Salt River at
16 and Prior to Statehood, dated July 2015, Ex. C021, Freeport 1 (Burtell Declaration).

17 10. Mr. Burtell is a Registered Geologist with a Master of Science in
18 Hydrology. Curriculum Vitae of Richard Burtell, Attachment A to Burtell Declaration.
19 Mr. Burtell has over twenty-five years of experience as an environmental scientist dealing
20 with a host of water and environmental matters, and his experience and expertise extend
21 to matters involving geology, hydrology, and hydrogeology. *Id.* Mr. Burtell worked at
22 the Arizona Department of Water Resources (ADWR) for twelve years. *Id.* For the
23 majority of his tenure, Mr. Burtell served as the Manager of the Adjudications Section at
24 ADWR. *Id.* As Manager of the Adjudications Section, Mr. Burtell was extensively
25 involved in evaluating the nature and occurrence of surface water in Arizona streams. *Id.*

26 11. Mr. Burtell analyzed several lines of evidence in order to assess whether the
27 Upper Salt River was navigable in its ordinary and natural condition: geomorphology,
28 historic accounts of stream flow conditions, documented needs for commercial navigation

1 prior to significant diversions, reconstruction of stream flow to assess predevelopment
2 stream depth and velocity, and prehistoric, historic, and recent efforts to boat the Upper
3 Salt.

4 12. As described in Mr. Burtell's Declaration and his hearing testimony, the
5 totality of the evidence reviewed and work performed by Mr. Burtell resulted in his
6 development of the opinion that the Upper Salt was not navigable in its ordinary and
7 natural condition at statehood. Burtell Declaration at ¶ 109.

8 13. The Commission finds Mr. Burtell's methods, analyses, and testimony to be
9 credible and persuasive.

10 **Native American Use**

11 14. A variety of different Native American cultures have occupied the Salt
12 River Valley dating back to before 100 A.D, and "archaeological studies in the upper Salt
13 River area have documented some 11,000 years of human use of the region." JE Fuller
14 Hydrology & Geomorphology, Inc., Arizona Stream Navigability Study for the Salt River:
15 Granite Reef Dam to the Confluence of the White and Black Rivers (revised June 2003),
16 Exh. 27, (Fuller's 2003 Upper Salt Report) at 2-1, 2-11, 2-12, 2-16, 2-22.

17 15. Despite this long history of inhabitation and use of the region, there is no
18 evidence to suggest that any prehistoric peoples ever used the Upper Salt River for
19 boating of any kind. 10/22/15 Trans. 710:6-12 (Fuller).

20 16. Jon E. Fuller of JE Fuller Hydrology & Geomorphology, Inc. was retained
21 by the ASLD to prepare a series of reports bearing upon the navigability of streams
22 throughout Arizona. Mr. Fuller testified in the hearings concerning the Salt River that
23 were held in 2005 and 2006, presenting the findings that he and his team memorialized in
24 a series of reports on behalf of the ASLD.

25 17. These reports include (1) JE Fuller Hydrology & Geomorphology, Inc.,
26 Arizona Stream Navigability Study for the Salt River: Granite Reef Dam to the
27 Confluence of the White and Black Rivers (revised June 2003), Exh. 27, (Fuller's 2003
28 Upper Salt Report); and (2) 1998 Final Report, Criteria for Assessing Characteristics of

1 Navigability for Small Watercourses in Arizona, Item No. C021, Freeport 6 (Criteria for
2 Assessing Characteristics of Navigability Report).

3 18. In 2015, Mr. Fuller prepared a PowerPoint presentation that he deemed an
4 update of his Salt River reports.

5 19. In the 2003 Upper Salt Report Mr. Fuller stated, “[a]lthough the
6 archaeological data suggest few changes in the flow regime of the upper Salt River and
7 little in the way of agricultural diversions or impediments to navigation, archaeological
8 research has not documented any use of the river for commercial trade and travel or for
9 any regular flotation of logs.” Fuller’s 2003 Upper Salt Report at 2-1. This fact is
10 uncontested, and consistent with findings already reached by this Commission in its
11 Report, Findings and Determination. Report, Findings and Determination Regarding the
12 Navigability of the Upper Salt River dated December 13, 2007 (Report, Findings and
13 Determination) at p. 21.

14 20. In his 2015 testimony, Mr. Fuller alluded to speculation about the potential
15 use of a balsa wood boat in irrigation canals. Mr. Fuller readily acknowledged that this
16 was “speculation,” not evidence of boat use on any portion of the Salt River. 10/22/15
17 Trans. 696:5-697:2 (Fuller).

18 21. The fact that the Native Americans did not use the Upper Salt River for
19 boating of any kind during the thousands of years in which they inhabited the region is
20 compelling evidence that the Salt River was not susceptible to use as a highway of
21 commerce in its ordinary and natural condition.

22 **Accounts of Boating on the Upper Salt River**

23 22. Mr. Burtell compiled information concerning the sparse historic accounts of
24 boating in Table 1 to his Declaration. Burtell Declaration at Table 1.

25 23. The Upper Salt’s history of downstream travel prior to the advent of
26 modern durable plastic boats is extremely limited. Burtell Declaration at Table 1. Several
27 of the historical accounts of boating on the Upper Salt River involve the use of rafts, not
28 for travel up or down the river, but as ferries serving as the functional equivalent of a

1 bridge. *Id.* Others involved use of boats in conjunction with constructing Roosevelt Dam,
2 not for purposes of upstream or downstream travel. *Id.*

3 24. Mr. Fuller testified that the first documented use of a boat is an account
4 involving a carpenter named Logan, who purportedly boated down the White and Salt
5 Rivers to Hayden's Ferry sometime prior to 1873. C054, Tab 392, p. 42; 5/17/16 Trans.
6 4577:11-17. The Logan account is not tabulated in Table 1 to Mr. Burtell's Declaration
7 because the account had not yet been discovered at the time Mr. Burtell submitted his
8 Declaration.

9 25. Logan's purported journey included the White River and Segment 1 of the
10 Salt River, both of which Mr. Fuller acknowledges are non-navigable for purposes of title.
11 The reason Logan may have been able to get a boat down the White River, Segments 1
12 through 3, and further downstream all the way to Hayden's Ferry is that the trip occurred
13 during "a spring flood." C054, Tab 392, p. 42.

14 26. During his testimony, Mr. Fuller reconfirmed his position on the White
15 River and Segment 1, and agreed that the spring flood is what allowed Logan to get
16 downstream on these non-navigable reaches:

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

19 BY MR. HOOD:

20 Q. Thank you, Mr. Fuller, and I understood you to be agreeing with me on
21 that point. We're on the same page.

22 A. Yes, I agree, yes.

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

27 A. Correct.

28 5/19/16 Trans. 5133:4-5135:10 (Fuller).

29 27. Mr. Fuller's 2003 Upper Salt Report also documents a failed log drive
30 attempt in 1873 in which, "Charles Hayden attempted to float logs down the Salt River

1 and to establish a lumber mill in Tempe....” Fuller’s 2003 Upper Salt Report at 3-34.

2 28. Mr. Hayden’s party was unable to get the logs downstream to their
3 destination, and Hayden’s log drive was therefore appropriately declared a failure.
4 Fuller’s 2003 Upper Salt Report at 3-34.

5 29. Mr. Fuller described that the failed log drive caused Hayden to conclude
6 “that logs would lodge in the canyons and could only be floated when the river was in
7 flood, but that at such times it would not be possible to hold them by a boom in the river.”
8 C054, Tab 392, pp. 42-43.

9 30. Contrary to his earlier statements, during the October 20, 2015 hearing,
10 Mr. Fuller testified to the Commission that Mr. Hayden’s trip occurred, not on the Salt
11 River, but on the White River or Black River. 10/20/15 Trans. 202:8-206:9 (Fuller).

12 31. Globe Power Company used boats on the river in 1893 for “measuring the
13 flow of water in the river, running lines for a system of reservoirs, [and] surveying for a
14 tunnel.” C053-384.

15 32. Mr. Fuller testified that the boats used by the Globe Power Company may
16 have been used for ferrying the surveyors across the river. 5/19/16 Trans. 4996 (Fuller).

17 33. The Arizona Republic reported on the difficulties encountered by the
18 engineers and described how the boat overturned and the men were thrown out. C018-60.

19 34. The power company had to later build a new boat because the first was lost
20 in a “little storm.” 5/17/16 Trans. at 4647 (Fuller).

21 35. The only other historic account(s) of downstream travel in the Upper Salt’s
22 natural condition – *i.e.* excluding instances of boating on Roosevelt Lake or in the
23 backwater created by construction of the dam – involved a gentleman (or gentlemen)
24 named Meadows. 11/18/15 Trans. 1238:8-1241:22 (Fuller).

25 36. The historical record is unclear whether there were one or two trips by
26 “Meadows” in the 1880s. One of the accounts was made 26 years after the event was
27 purported to have occurred, and the passage of time and its impact on memory is likely
28 the reason that this account indicated that the trip was conducted by Jim Meadows in 1883

1 as opposed to John Meadows in 1885. Burtell Declaration ¶ 25 and Table 1; 2/23/16
2 Trans. 2771:10-25 (Burtell); Fuller’s 2003 Upper Salt Report at 3-34, 3-25, 3-36.

3 37. Mr. Fuller agreed that it is unclear whether these two accounts describe the
4 same Meadows trip. 10/20/15 Trans. 221:1-224:8 (Burtell).

5 38. It is not merely the shared surname that indicates this was likely one trip
6 rather than two. The details of the trips are very similar, including the stretch of river they
7 covered (upstream of Tonto Creek to Tempe) and the significant impediments to
8 navigation that they both faced. In each instance the boat struck rocks, and the party was
9 forced to physically dislodge the boat. Burtell Declaration ¶ 25 and Table 1; 2/23/16
10 Trans. 2771:10-25 (Burtell); Fuller’s 2003 Upper Salt Report at 3-34, 3-25, 3-36.

11 39. The Meadows account(s) describe significant impediments to navigation,
12 with the boat being stopped by rocks, boats being upturned with loss of supplies, and the fear
13 of death. Burtell Declaration ¶ 25 and Table 1; 2/23/16 Trans. 2771:10-25 (Burtell);
14 Fuller’s 2003 Upper Salt Report at 3-34, 3-25, 3-36.

15 40. It is likely that the Meadows trip occurred during a time of high water, as
16 the stream was described as ranging from six to 20 feet deep – depths far outside of the
17 normal range of flow for the Upper Salt River. Fuller’s 2003 Upper Salt Report at 3-34,
18 3-25, 3-36; Burtell Declaration ¶¶ 99-100 and Table 7.

19 41. Mr. Burtell testified in his Declaration that “[t]aken together,” these very
20 limited historic accounts “do not demonstrate that the Salt River above Roosevelt Dam
21 was reliably used, or susceptible to use, for trade or travel prior to statehood. Most of the
22 accounts either involved using boats to cross the river or were downstream recreational
23 floats. There is simply no evidence of extensive or continued use of the river at that time
24 for commercial purposes.” Burtell Declaration ¶ 29.

25 42. The Commission finds that the Upper Salt River’s scant history of attempted
26 boating is a reflection that, in its natural and ordinary condition, the stream was shallow
27 and characterized by frequent rapids and riffles and was not susceptible to use as a
28 highway of commerce.

1 **The Ability of the Upper Salt River to Meet Significant Needs for Commercial**
2 **Navigation**

3 43. Mr. Burtell testified in his Declaration that the first non-Indian settlers in the
4 Salt River Valley were the military, miners, farmers and ranchers, and those involved in
5 the construction of Roosevelt Dam. Burtell Declaration ¶ 45-61.

6 44. The military, miners, farmers and ranchers, and settlers were engaged in
7 activities that required the transport of supplies and goods, and, in the unsettled West, they
8 had to make good use of the best available transportation resources. Burtell Declaration
9 ¶ 45-61. Despite these obvious needs for transportation of goods and people, these early
10 settlers did not use the Upper Salt for such purposes. *Id.*

11 Military

12 45. In 1870, a military post eventually known as Fort Apache was established
13 along the White River near the headwaters of the Salt River. Burtell Declaration ¶ 47.

14 46. Fort Apache “was ‘of singular importance to the Army’ due to its location
15 between the domains of the Apaches and Navajos.” Burtell Declaration ¶ 47 (*quoting*
16 Brandes, *Frontier Military Posts of Arizona* (1960) pp. 10-11).

17 47. Supplying the Fort Apache military installation proved to be a significant
18 challenge and an extremely expensive undertaking. Burtell Declaration ¶¶ 48-50.

19 48. Initially, supplies were shipped overland via Fort Whipple near Prescott,
20 northeast to Show Low, and then south to Fort Apache. Burtell Declaration ¶ 48. This
21 route required 268 miles of wagon travel, which was an extremely time-consuming and
22 expensive way to supply Fort Apache. *Id.*

23 49. Multiple alternative overland supply routes were developed over the years to
24 come, but the quality of the roads was poor and the cost of shipment was high. Burtell
25 Declaration ¶¶ 48-50.

26 50. It was more expensive to transport goods to Fort Apache than any other
27 location in Arizona. Burtell Declaration ¶¶ 48-50; 2/23/16 Trans. 2801 (Burtell).

28 51. The maps attached as Figures 3a and 3b to Mr. Burtell’s Declaration depict

1 the overland routes used to ship supplies. Figures 3a and 3b to Burtell Declaration.

2 52. Mr. Burtell testified that “[i]f the Salt River had been a practical and reliable
3 means of transportation at this time, the military would have utilized it to supply Fort
4 Apache rather than having to rely on the” unsatisfactory overland routes that the military
5 was forced to use. Burtell Declaration ¶¶ 48-50 and Figures 3a and 3b.

6 53. The Commission finds that the Salt River was ignored as a solution to the
7 military’s significant transportation problems because the river was not susceptible to use
8 as a highway of commerce.

9 Miners

10 54. At the same time that the United States military was grappling with how to
11 more effectively supply Fort Apache, miners in the Globe District and McMillenville
12 were suffering from the poor overland transportation available to them prior to the arrival
13 of the railroad. Burtell Declaration ¶¶ 51-55.

14 55. Mr. Burtell recounted that, with respect to the mines in the Globe District,
15 “[t]he single most serious factor affecting the cost of mining was transportation,” and
16 that “[t]he most serious drawback to copper mining was the difficulty of transportation
17 and shipping bullion out.” Burtell Declaration ¶¶ 51-55 (quoting Bigando, *Globe,
18 Arizona, the Life and Times of a Western Mining Town, 1864-1917* (1989) pp. 37-38, and
19 Sain, *Miami, a History of the Miami Area, Arizona* (1989) pp. 6-7, 9; 2/23/16 Trans.
20 2806:4-2812:6 (Burtell). The miners experimented with a variety of different overland
21 routes, but none were remotely satisfactory until the introduction of the railroad in 1898.
22 *Id.*

23 56. Not only were the miners unable to use the Salt River to transport industrial
24 supplies in, or ore or bullion out, they were unable to use the Salt River to obtain crops
25 and other basic necessities needed to sustain their communities. 2/23/16 Trans. 2807-
26 2809 (Burtell).

27 57. Mr. Burtell testified that “[t]hese communities, when they were first
28 established, they needed foodstuffs and supplies, and by this time, the railroad had entered

1 the Salt River Valley, I think, in Maricopa, so supplies were coming in from California,
2 but getting those supplies up to Globe and the miners was not a trivial matter.” 2/23/16
3 Trans. 2807:10-15 (Burtell).

4 58. A variety of extremely difficult, extremely expensive overland wagon roads
5 were instead used for these purposes, and again the Salt River was ignored as a highway
6 for commerce because the Salt River was not susceptible to such use. Burtell Declaration
7 ¶¶ 51-55; 2/23/16 Trans. 2807 (Burtell).

8 Early Settlers

9 59. At this same time miners were establishing communities along or near the
10 Salt River, a number of early settlements were also established along or near the Salt
11 River. Burtell Declaration ¶ 56.

12 60. In the 1880s and 1890s, at least six post offices were established at
13 settlements along or near the Salt River. Burtell Declaration ¶ 57.

14 61. The existence of post offices indicates the presence of population centers.
15 Burtell Declaration ¶ 57.

16 62. Like Fort Apache and the miners in McMillenville and the Globe District,
17 settlers in these communities relied upon overland travel for transportation of goods and
18 people, as there is no evidence of use of the Salt River to serve the commercial needs of
19 these settlers. The Salt River was not even suitable for purposes of transporting tangible
20 objects as light as letters and envelopes to or from these several post offices. Burtell
21 Declaration ¶¶ 56-58; 2806:4-2812:25 (Burtell).

22 Construction of Roosevelt Dam

23 63. During the construction of Roosevelt Dam, many wagon roads were
24 constructed for purposes of hauling supplies and lumber. Burtell Declaration ¶ 59.

25 64. Lumber was cut and milled in the Sierra Ancha Mountains and was then
26 hauled overland, first south from the mountains and across the Salt River near Livingston,
27 and then west alongside the river until reaching the dam site. Burtell Declaration ¶ 60.

28 65. If Segment 3 of the Salt River had been susceptible to use for downstream

1 commerce, it would have been used for transporting this lumber rather than a cumbersome
2 overland wagon road running directly alongside the river. Yet another need went unmet
3 by the Salt River, undoubtedly a reflection of its inability to serve as a highway for
4 commerce. Burtell Declaration ¶¶ 59-61; 2813:1-2816:17 (Burtell).

5 **Historic Accounts and Government Assessments of the Upper Salt River**

6 66. In 1865, the Arizona Territorial Legislature requested an appropriation from
7 the United States Congress to improve the navigability of the Colorado River, stating, in
8 part, as follows:

9 the Colorado River is the only navigable water in this
10 Territory; that it is navigable, in high stages of water, five
11 hundred miles; that by the expenditure of a small amount of
12 money, it may be rendered navigable much higher up. That
13 portion of the river between Fort Yuma and Fort Mohave has a
14 changeable channel and is obstructed by boulders, snags, and
15 sand bars rendering the navigation difficult and dangerous;
16 that the removal of said obstructions would greatly facilitate
17 the navigation of this part of the river...that if navigation of
18 said river is improved it will accommodate the General
19 Government and greatly increase and hasten the development
20 of vast mineral other resources of this Territory.

21 Burtell Declaration ¶ 41.

22 67. Four cadastral surveys were conducted along Segment 3 of the Upper Salt
23 river in 1881 that also indicate that Segment 3 was not navigable. Burtell Declaration ¶¶
24 42-44. General Land Office surveyors were instructed to meander both banks of rivers
25 that they deemed to be navigable. *Id.* at ¶ 42. Not one of the surveyors meandered both
26 banks of the Salt River. Burtell Declaration ¶¶ 42-44. This is because, consistent with the
27 historic record that demonstrates that Segment 3 was unsuitable for transporting logs,
28 goods, or people, in the surveyors' opinion Segment 3 was not navigable. *Id.*

68. The Commission noted in its Report, Findings and Determination:

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

1 Report, Findings and Determination at pp. 36-37.

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

6 **Effect of Boulders and Rapids on Navigating the Upper Salt River**

7 70. In its ordinary and natural condition, the Upper Salt River is heavily laden
8 with rapids that run the gamut from Class I, all the way up to Class V. Burtell Declaration
9 ¶¶ 63-68.

10 71. At least 41 named rapids have been mapped on the Upper Salt River
11 upstream of Roosevelt Dam. Burtell Declaration ¶ 63.

12 72. One of the ASLD's witnesses, a commercial outfitter named Alex Mickel,
13 advertises that the Upper Salt River has "[m]ore rapids per mile than any other Arizona
14 river." 10/21/15 Trans. 420 (Mickel).

15 73. One of the rapids in the Upper Salt River, the infamous Quartzite Falls, has
16 claimed multiple lives. 5/19/16 Trans. 5128:8-5129:25 (Fuller).

17 74. While the rapids in the Upper Salt are exciting to adventuresome
18 recreationalists journeying in modern recreational craft, they posed a serious impediment
19 to commercial trade and travel in the types of craft commonly used for those purposes
20 *circa* 1912. This self-evident fact is underscored by the nearly complete absence of any
21 boating history on the Upper Salt under ordinary conditions prior to the advent of modern
22 durable craft.

23 75. Segment 2 of the Salt River is far and away the segment that is least
24 susceptible to navigation by historic wooden boats of any portion of any river to which the
25 Arizona State Land Department (ASLD) has claimed title under the Equal Footing
26 Doctrine.

27 76. Mr. Fuller readily acknowledged that "Segment 2 has more significant
28 rapids, which are more of an issue for boating in a historic wooden craft, than any other

1 segment of any river” in Arizona that Mr. Fuller has opined is navigable. 5/19/16 Trans.
2 5128:8-17 (Fuller).

3 77. Mr. Fuller testified that multiple segments of the Gila River and the Verde
4 River that the Commission has already deemed to be non-navigable are equally or more
5 susceptible to navigation compared to Segment 3. 5/19/16 Trans. 5126:11 – 5127:18
6 (Fuller).

7 78. Mr. Burtell testified that the finding that the San Juan River in Utah is non-
8 navigable provides a compelling basis for comparison to the Upper Salt River:

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

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

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

18 A. That’s correct.

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

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

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

25 A. That’s correct.

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

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

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

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

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

10 79. Mr. Burtell's testimony about the stark difference between conducting
11 commerce in a wooden boat in 1912 versus modern recreational boating in modern
12 durable materials demonstrates the disconnect between Mr. Fuller's views about what
13 constitutes navigability versus *The Daniel Ball* test.

14 80. The Commission finds that Mr. Fuller's opinions are based on his
15 experience as a recreational boater, which has demonstrated that these rapids may be
16 traversed in modern recreational crafts made from modern, durable materials.

17 81. Mr. Burtell testified in his Declaration that "[l]ike the San Juan River, the
18 Upper Salt River is very popular among modern recreational boaters.... Its rapids are as
19 large, if not larger, its slopes are steeper ..., and, like the San Juan, it is characterized by
20 narrow canyons." Burtell Declaration ¶ 68.

21 82. The Commission finds that the rapids that are sought after by modern-day
22 recreationalists render the Upper Salt non-susceptible to navigation using the craft
23 commonly used for trade and travel at statehood.

24 **Multi-Channel River Conditions in Segment 3**

25 83. Significant rapids exist in Segment 3, although they are not as prevalent in
26 Segment 3 as they are in Segment 2. Burtell Declaration ¶ 64 and Table 4.

27 84. Mr. Burtell testified before the Commission, that he "counted no less than
28 about 14 locations within Segment 3 where there was multi-channels, where the river split
either into two or more channels." 2/23/16 Trans. 2826:7-2831:18 (Burtell); *see also*
Burtell Declaration ¶¶ 69-72.

85. Mr. Burtell testified that because the stream discharge is split among two or

1 more channels, stream depth is reduced, presenting “yet another challenge for a boater
2 who’s trying to haul either people or supplies, hitting a stretch of the river that is now less
3 flow, nothing -- for no -- for no cultural reason but simply for a physical reason, that
4 geomorphologically the river split.” 2/23/16 Trans. 2826:7-2831:18 (Burtell); *see also*
5 Burtell Declaration ¶¶ 69-72.

6 86. Even if one of the multiple channels has sufficient flow, it is often difficult
7 to determine which channel to use. 10/21/15 Trans. 289 (Williams); 1/27/16 Trans. 2254
8 (Mussetter).

9 87. During his testimony, Mr. Burtell elaborated as follows on how
10 multichannel conditions impede navigation:

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

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

26 2/23/16 Trans. 2826:7-2831:18 (Burtell); Burtell Declaration ¶¶ 69-72.

27 88. The Commission finds that, along with the existence of boulder gardens,
28 rapids, and low flows, the multi-channel river conditions explain why historic wooden
29 boats were not capable of using Segment 3 to conduct commerce.

30 89. Combined with its rocky riverbed, rapids, and already low natural depths,
31 the multi-channel conditions of Segment 3 explain why the significant populations that
32 surrounded Segment 3 did not use it as a means of conducting trade or travel.

33 **Depth of Stream Flows**

34 90. In order to assess the Upper Salt River’s ordinary and natural streamflow,

1 Mr. Burtell performed a streamflow reconstruction to account for diversions and allow an
2 assessment of the river “absent the effects of man.” 2/23/16 Trans. 2838:19-2859:19
3 (Burtell); Burtell Declaration §§ VII and VIII.

4 91. Mr. Burtell reconstructed streamflow from three USGS gages, using a
5 period of record spanning from the late 1880s to 1940. 2/23/16 Trans. 2838:19-2859:19
6 (Burtell); Burtell Declaration ¶¶ 77, 84.

7 92. Mr. Burtell selected the period from the late 1880s to 1940 because good
8 stream flow data are available, it was a period that was neither particularly wet nor
9 particularly dry, it was a period prior to substantial effects from well pumpage, and
10 because the amount of cultural diversions remained fairly constant. 3/30/15 Trans. 2675:5
11 – 2676:22 (Burtell).

12 93. On rebuttal, Mr. Fuller adopted Mr. Burtell’s flow and depth
13 reconstructions. 5/19/16 Trans. 5117:2-5121:8 (Fuller).

14 94. Mr. Fuller noted that he thought the period of record might have been a little
15 on the dry side, but nevertheless agreed that the reconstruction yielded appropriate
16 reconstructed depths. 5/19/16 Trans. 5117:2-5121:8 (Fuller).

17 95. When presented with Mr. Burtell’s calculations, Mr. Fuller agreed that
18 Mr. Burtell’s period of record is actually wetter than the long term average at two of the
19 three gages, and just slightly drier than average at the other. 5/19/16 Trans. 5117:2-
20 5121:8 (Fuller); C057, Freeport 14.

21 96. Similar to Mr. Burtell’s evaluations of the San Pedro, Santa Cruz, Upper
22 Gila, and Verde, Mr. Burtell’s reconstruction of stream flows in the Upper Salt was
23 extremely conservative, meaning that he erred on the side of adding too much water back
24 into the stream. 2/23/16 Trans. 2838:19-2859:19 (Burtell); Burtell Declaration §§ VII and
25 VIII.

26 97. In conducting his streamflow reconstructions, Mr. Burtell assumed that a
27 conservatively high volume of water was being diverted to irrigate each cultivated acre,
28 meaning he added more water into the stream than was ever diverted from it. Some of the

1 water that Mr. Burtell added back into the river through his reconstruction was already
2 measured by the gages because it was diverted water that returned to the river as a return
3 flow or spill water. This produces double-counting that results in conservatively high
4 reconstructed depths. As a result, in its ordinary and natural condition, the Upper Salt had
5 less flow and lower depths. 2/23/16 Trans. 2838:19-2859:19 (Burtell); Burtell
6 Declaration §§ VII and VIII.

7 98. Mr. Burtell's streamflow reconstruction results are tabulated in Table 7 to
8 his Declaration. Burtell Declaration at Table 7. The median reconstructed streamflows
9 (*i.e.* Q50) range from less than 298 cubic feet per second (cfs) to less than 456 cfs, and the
10 higher range of flows represented by the 25% flow (*i.e.* Q25) range from less than 623 cfs
11 to less than 977 cfs. *Id.*

12 99. The median reconstructed streamflows, representing a very conservative
13 reconstruction of the Upper Salt River in its natural condition, pale in comparison to the
14 levels of discharge associated with rivers throughout the United States that have been
15 deemed navigable. Information Regarding Navigability of Selected U.S. Watercourses,
16 Exh. 017. The Upper Salt's natural discharge is also significantly less than the discharge
17 of streams that have been deemed nonnavigable. *Id.*

18 100. The Commission finds that Mr. Burtell's reconstruction confirms that the
19 Upper Salt River is a relatively small, shallow desert stream that did not have enough
20 natural discharge to support commercial navigation.

21 101. Mr. Burtell's streamflow reconstruction indicates that, under median natural
22 flow, the Upper Salt River ranged from less than 1.7 feet of average depth near Chrysotile,
23 to a maximum depth of between less than 1.6 to less than 2.3 feet at Roosevelt. Burtell
24 Declaration at Table 7; 2/23/16 Trans. 2838:19-2859:19 (Burtell).

25 102. The Commission finds that Mr. Burtell's streamflow reconstruction results
26 in greater flow than would have been found under natural conditions because
27 Mr. Burtell's depths are conservatively overstated.

28 103. Mr. Burtell's reconstructed depths correspond to measurements taken in the

1 vicinity of the gage stations. These measurements are taken near the edge of pools, not in
2 riffles or rapids, and they therefore do not reflect the shallow areas of the river that are the
3 limiting factor for navigation. Mr. Burtell prepared two cross-sections at riffles along the
4 Upper Salt to demonstrate “that it’s not the pools that are limiting [to navigation]; it’s the
5 rapids, the riffles, the bars, the shallow areas.” Accordingly, Mr. Burtell illustrated “how
6 much different the flow depth might be on a riffle than it would be elsewhere.” 2/23/16
7 Trans. 2863:3-2869:15 (Burtell); Burtell Declaration ¶¶ 100-104 and Figure 7A
8 (photographs depicting gage locations relative to shallower riffle areas).

9 104. Under conditions very close to the reconstructed median, Mr. Burtell’s
10 cross-sections show an average depth of 1.1 feet at the riffle in Segment 2 and 0.9 feet at
11 the riffle in Segment 3. 2/23/16 Trans. 2863:3-2869:15 (Burtell); Burtell Declaration
12 ¶¶ 100-104 and Figure 7A (photographs depicting gage locations relative to shallower
13 riffle areas).

14 105. The Commission finds that the rapids, riffles, bars, and other shallow areas
15 are the limiting factors concerning a river’s susceptibility to use as a highway for
16 commerce. 2/23/16 Trans. 2863:3-2869:15 (Burtell); Burtell Declaration ¶¶ 100-104 and
17 Figure 7A (photographs depicting gage locations relative to shallower riffle areas).

18 106. The Commission finds that the depths of pools are far less important in
19 evaluating navigability.

20 107. At least 97 riffles have been mapped in Segment 2, and at least 60 have been
21 mapped in Segment 3. Burtell Declaration ¶ 104.

22 108. These 97 mapped riffles are in addition to the numerous rapids and provide
23 a further indication as to why the Upper Salt has never been susceptible to use as a
24 highway for commerce. 2/23/16 Trans. 2863:3-2869:15 (Burtell); Burtell Declaration
25 ¶¶ 100-104 and Figure 7A.

26 109. Based on his extremely conservative depth figures, and applying them to
27 Supreme Court precedent, Mr. Burtell concluded that, consistent with the other lines of
28 evidence, the Upper Salt was not susceptible to navigation as a highway for commerce.

1 Burtell Declaration §§ VIII and IX.

2 110. In *United States v. Utah*, 283 U.S. 64 (1931), the San Juan River was
3 determined to be non-navigable with depths between one and three feet “for 219 days”
4 each year, and for the other “146 days a depth of over three feet.” 1930 Special Master’s
5 Report, Item No. C018, Tab 213, at p. 167.

6 111. A 1930 Special Master’s Report evaluating the navigability of the San Juan
7 River indicated that “there is a depth of no more than 2 feet” five months per year and “at
8 other times there are places where the depth is less than 2 feet...” 1930 Special Master’s
9 Report, Item No. C018, Tab 213, at p. 169.

10 112. The 1930 Special Master’s Report evaluating the navigability of the San
11 Juan River noted that “[t]he evidence as to depth makes it clear that boats with a draft of
12 two feet could navigate not more than half the year...”. 1930 Special Master’s Report,
13 Item No. C018, Tab 213, at p. 180.

14 113. The Commission finds that, 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.

18 114. The San Juan is but one useful point of comparison. While adopting
19 Mr. Burtell’s reconstructions for the Upper Salt River, Mr. Fuller agreed that Mr. Burtell’s
20 reconstructed depths are very similar to his reconstructed depths for the Upper Gila and
21 the Verde – two rivers that the Commission has already deemed non-navigable. 5/17/16
22 Trans. 4735:16-4736:14 (Fuller); 5/19/16 Trans. 5125:24-5126:10 (Fuller).

23 115. Mr. Burtell testified that, when he applied his conservative depth figures to
24 Supreme Court precedent, he concluded that, consistent with the other lines of evidence,
25 the Upper Salt River was not susceptible to commercial navigation. Burtell Declaration
26 §§ VIII and IX.

27 **Navigability Proponent’s Reliance on Modern Watercraft**

28 116. During the 2015 and 2016 proceedings on remand, the proponents of

1 navigability called four witnesses, J.E. Fuller, Alex Mickel, Tyler Williams and Brad
2 Dimock.

3 117. The ASLD called Brad Dimock to testify about his boating experience in
4 Arizona, which centers squarely on the Colorado River. As was the case with respect to
5 the Verde River, Mr. Dimock's only experience boating the Upper Salt is limited to some
6 kayaking in modern polyethylene recreational craft and modern inflatable rafts. 10/22/15
7 Trans. 543:14-550:5 (Dimock); C021 at Freeport 7 (3/31/15 Verde Trans. 2929:7 – 2931:7
8 (Dimock)).

9 118. Mr. Dimock testified that his experience was based on trips which mostly
10 occurred in the 1970s, and all at high water. 10/22/15 Trans. 543:14-550:5 (Dimock);
11 C021 at Freeport 7 (3/31/15 Verde Trans. 2929:7 – 2931:7 (Dimock)).

12 119. Mr. Dimock was unable to discuss specifics about any rapids in the Upper
13 Salt, and he was uncertain what kind of boat he would design for the Upper Salt because
14 he had only seen it at high water. He knew he would want it to be as durable as possible
15 for this rocky stream. 10/22/15 Trans. 543:14-550:5 (Dimock); C021 at Freeport 7
16 (3/31/15 Verde Trans. 2929:7 – 2931:7 (Dimock)).

17 120. Mr. Dimock testified that he would not take his replica boat, the Edith, on
18 the Upper Salt. 10/22/15 Trans. 543:9-545:19 (Dimock).

19 121. The Commission finds that the Upper Salt's pervasive boulders and rapids
20 would have pulverized a wooden boat under ordinary and natural conditions.

21 122. The proponents of navigability rely principally on Mr. Fuller's testimony to
22 support their position that the Salt River is navigable under *The Daniel Ball* test.
23 Mr. Fuller's opinions are fundamentally flawed because he approaches navigability as
24 merely a question whether he can get a modern recreational craft downstream. C018, Tab
25 148 (6/16/14 Gila Trans. 42:5-17 and 61:14-15 (Fuller)); 11/17/15 Trans. 1212:7-1213:8
26 (Fuller).

27 123. Mr. Fuller rendered opinions using an erroneous standard, based on
28 recreational boating rather than commercial navigation. He evaluated navigability from

1 the perspective of the ability to float a modern recreational craft, rather than on the Upper
2 Salt River's susceptibility to use as a highway for commerce. C018, Tab 148 (6/16/14
3 Gila Trans. 42:5-17 and 61:14-15 (Fuller)); 11/17/15 Trans. 1212:7-1213:8 (Fuller).

4 124. Mr. Fuller based his opinions on recreational boating standards, known as
5 the Hyra method, which were developed by the U.S. Fish & Wildlife Service in 1978 and
6 his personal recreational experiences with modern recreational craft, such as fiberglass
7 kayaks and polyethylene canoes. C018, Tab 148 (6/16/14 Gila Trans. 42:5-17 and 61:14-
8 15 (Fuller)); 11/17/15 Trans. 1212:7-1213:8 (Fuller).

9 125. Mr. Fuller contends that six inches of depth is sufficient to support a finding
10 of navigability:

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

15 * * *

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

18 C018, Tab 148 (6/16/14 Gila Trans. 42:5-17 and 61:14-15 (Fuller)); 11/17/15 Trans.
19 1212:7-1213:8 (Fuller).

20 126. The ASLD called Mr. Williams and Mr. Mickel to provide similar
21 testimony – that they believe the Salt River to be navigable because they have personal
22 experience boating it in modern recreational craft, which are constructed of extremely
23 durable materials and bear little resemblance to the wooden craft used for commerce at the
24 time of Arizona's statehood.

25 127. Mr. Williams' assessment of "navigability" is based on his recreational
26 boating experiences on a variety of Arizona watercourses, which are chronicled in his
27 guidebook, *Paddling Arizona, A Guide to Lakes, Rivers, and Creeks*. 10/21/15 Trans.
28 324:4-337:19 (Williams); Exhibit C049 at Freeport 13.

128. Mr. Williams does most of his boating in polyethylene kayaks. 10/21/15
Trans. 324:4-337:19 (Williams); Exhibit C049 at Freeport 13.

1 129. If recreational paddling satisfied *The Daniel Ball* test, then something on the
2 order of 50-70 rivers in Arizona would be navigable for purposes of title, as Mr. Williams
3 guidebook and testimony reflect that he has paddled 50-70 rivers in Arizona in plastic
4 kayaks without difficulty. 10/21/15 Trans. 324:4-337:19 (Williams); Exhibit C049 at
5 Freeport 13.

6 130. Mr. Mickel's experience on the Salt River is limited to modern recreational
7 craft, not wooden boats that were used to conduct commerce circa 1912. 10/21/15 Trans.
8 388, 405, 471-72 (Mickel).

9 131. As a commercial outfitter, Mr. Mickel provided insight into the seasonal and
10 variable nature of flows in the Upper Salt, explaining that commercial trips on the Upper
11 Salt typically are limited to the season between February or March and May or June
12 because the river's flows are unpredictable, and the boating season can in fact be limited
13 to March and early April depending on the year. 10/21/15 Trans. 388, 405, 471-72
14 (Mickel).

15 132. Mr. Mickel's experience on the Upper Salt is purely recreational and is
16 strictly limited to durable modern recreational craft. 10/21/15 Trans. 388, 405, 471-72
17 (Mickel).

18 133. Each of the proponents' witnesses based his opinion of susceptibility to
19 navigation on the ability to float modern recreational craft, as opposed to "the kinds of
20 commercial use that, as a realistic matter, might have occurred at the time of statehood."
21 *PPL Montana v. Montana*, 132 S.Ct. 1215, 1233 (2012).

22 134. Mr. Fuller explained in a 1998 report that "rivers were not generally used
23 for recreational travel until the development of new materials such as fiberglass and
24 artificial rubber after World War II," and commercial recreational rafting, which did not
25 begin until the 1930s, did not become common until the 1970s. Item No. C021, Freeport
26 6, Final Report, Criteria for Assessing Characteristics of Navigability for Small
27 Watercourses in Arizona, pp. 32-33.

28 135. Mr. Fuller also explained in the 1998 report that "[m]ore recently the

1 development of one-person *lightweight* kayaks and ‘rubber duckies’ has made it possible
2 to boat shallow rivers previously thought unboatable.” Criteria for Assessing
3 Characteristics of Navigability Report, Item No. X016, Freeport 8, at p. 28 (emphasis
4 added); Item No. X054 at Freeport 45 (Gila River 6/18/14 Trans. 635:16-20 (Farmer)).

5 136. Recreational boating is a modern phenomenon that occurred in response to
6 the increased availability of modern materials. 1998 Final Report, Criteria for Assessing
7 Characteristics of Navigability for Small Watercourses in Arizona, Item No. C021,
8 Freeport 6, p. 32.

9 137. It is uncontroverted that modern recreational craft are also significantly
10 more durable than the craft used in 1912. 10/22/15 Trans. 624-25 (Fuller); 1998 Final
11 Report, Criteria for Assessing Characteristics of Navigability for Small Watercourses in
12 Arizona, Item No. C021, Freeport 6, p. 32.

13 138. The timeline of recreational travel on rivers coincides with the development
14 of the Hyra Method in 1978.

15 139. The introduction of the types of modern, durable, low-draw recreational
16 crafts that were not available at statehood was the primary driver behind the development
17 of recreational boating well after statehood:

18 The development of durable small boats – plastic, fiberglass
19 and other modern types of canoes and kayaks, inflatable boats
20 for single paddlers and for groups – all contributed to the
21 rising popularity of river running in Arizona especially on
rivers not previously considered boatable, or boatable only
very rarely because of low water.

22 1998 Final Report, Criteria for Assessing Characteristics of Navigability for Small
23 Watercourses in Arizona, Item No. C021, Freeport 6, p. 32.

24 140. The Commission finds that one of the benefits of modern recreational boats
25 is their lighter weight relative to historic boats. Accordingly, consistent with the
26 Archimedes principle, these lighter modern boats draw less water than heavier historic
27 boats.

28 141. The Commission also finds that modern recreational boats are significantly

1 more durable than historic boats.

2 142. The Commission finds that the modern recreational craft that are used today
3 on the Upper Salt River are not meaningfully similar to those in customary use for trade
4 and travel at the time of statehood. To the contrary, modern plastic canoes and plastic and
5 inflatable kayaks draw less water and therefore require less depth, they offer significantly
6 greater durability, and they are able to bounce off of rocks without damage unlike wooden
7 boats.

8 143. Moreover, the Commission finds that use of these modern crafts for
9 recreational purposes bears no resemblance to the commercial activities for which
10 navigable waterways were used circa 1912. *PPL Montana*, 132 S.Ct. at 1233 (instructing
11 that “evidence must be confined to that which shows the river could sustain the kinds of
12 commercial use that, as a realistic matter, might have occurred at the time of statehood.”).

13 144. The Commission finds that the evidence presented to the Commission –
14 including archaeological, historical, hydrologic, and geomorphic evidence – supports the
15 conclusion that the Upper Salt River was not susceptible to being used as a highway for
16 commerce in its ordinary and natural condition at or before the time of statehood.

17 CONCLUSIONS OF LAW

18 Based upon the evidence in the record and application of relevant federal and state
19 law, the Commission makes the following conclusions on questions of law and mixed
20 questions of law and fact:

21 1. The proponents of navigability for the Salt bear the burden of proof and
22 must demonstrate by a preponderance of the evidence that specific segments of the river
23 were navigable in their ordinary and natural condition. *State ex rel. Winkleman v. Arizona*
24 *Navigable Stream Adjudication Comm’n*, 224 Ariz. 230, 239, ¶¶ 17 (App. 2010).

25 2. The test of navigability for title is a federal test based on more than 150
26 years of case law. *PPL Montana v. Montana*, 132 S. Ct. 1215, 1227 (2012).

27 3. The test for navigability articulated in *The Daniel Ball* has become the
28 standard test for purposes of navigability for title:

1 Those rivers must be regarded as public navigable rivers in
2 law which are navigable in fact. And they are navigable in
3 fact when they are used, or are susceptible of being used, in
4 their ordinary condition, as highways for commerce over
5 which trade and travel are or may be conducted in the
6 customary modes of trade and travel on water.

7 *The Daniel Ball*, 77 U.S. 557, 563 (1870).

8 4. In *The Daniel Ball*, the Supreme Court held that Grand River was navigable
9 because it supported the passage of a steamer that carried 123 tons of merchandise and
10 passengers both upstream and downstream. *Id.* at 564-65.

11 5. Arizona's statutory definition of a navigable waterway paraphrases *The*
12 *Daniel Ball* Test and states that:

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

19 A.R.S. § 37-1101(5).

20 6. The test for navigability is one of "navigability in fact." *PPL Montana v.*
21 *Montana*, 132 S. Ct. 1215, 1227 (2012). Accordingly, the focus is on "rivers really
22 navigable." *Id.* (quoting *Shively v. Bowlby*, 152 U.S. 1, 31 (1894)).

23 7. It is "not every small creek in which a fishing skiff or gunning canoe can be
24 made to float at high water which is deemed navigable, but, in order to give it the
25 character of a navigable stream, it must be generally and commonly useful to some
26 purpose of trade or agriculture." *United States v. Rio Grande Dam & Irrigation Co.*, 174
27 U.S. 690, 698-99 (1898) (quoting *The Montello*, 20 Wall. 430, 442).

28 8. In addressing the navigability of the Rio Grande, the largest and longest
river in New Mexico, the United States Supreme Court concluded that:

Obviously, the Rio Grande within the limits of New Mexico
is not a stream over which in its ordinary condition trade and
travel can be conducted in the customary modes of trade and
travel on water. Its use for any purposes of transportation has

1 been and is exceptional, and only in times of temporary high
2 water.

3 174 U.S. 690 at 699.

4 9. In addressing the navigability of the Red River in the State of Oklahoma, the
5 Supreme Court of the United States concluded that the entire length of the Red River,
6 more than 500 miles in all, was non-navigable due to variable water flows and river bed
7 conditions such that

8 trade and travel neither do nor can move over that part of the
9 river, in its natural and ordinary condition, according to the
10 modes of trade and travel customary on water; in other words,
11 that it is neither used, nor susceptible of being used, in its
12 natural and ordinary condition as a highway for commerce.
13 Its characteristics are such that its use for transportation has
14 been and must be exceptional, and confined to the irregular
15 and short periods of temporary high water. A greater capacity
16 for practical and beneficial use in commerce is essential to
17 establish navigability.

18 174 U.S. 690 at 591.

19 10. The Red River is non-navigable for purposes of title, notwithstanding the
20 fact that the Red River is used extensively for modern recreational boating. Susceptibility
21 to recent recreational use in modern recreational watercraft is not the standard for
22 assessing navigability under *The Daniel Ball* test. *PPL Montana*, 132 S.Ct. at 1234
23 (holding that “present day recreational use of the river did not bear on navigability,” and
24 that “reliance upon the State’s evidence of present-day, recreational use, at least without
25 further inquiry, was wrong as a matter of law.”).

26 11. The same is true of the San Juan River and the Rio Grande River, which are
27 both used for recreational purposes in modern recreational craft, but which are not
28 susceptible to use as a highway for commerce in the crafts commonly used for such
29 purposes at the time of Utah’s and New Mexico’s respective statehoods.

30 12. A determination of navigability must consider a river both in its “ordinary
31 condition,” *e.g.* absent extreme drought or flooding, and in its “natural condition,” *e.g.*
32 absent human diversions. *State ex rel. Winkleman v. Arizona Navigable Stream*

1 *Adjudication Comm'n*, 224 Ariz. 230, 241, ¶ 28 (App. 2010).

2 13. Evidence from a time before modern-era settlement and farming began
3 having a substantial impact on the river is considered the best evidence of the river's
4 natural condition. 224 Ariz. 230 at 242, ¶ 30. "Assuming the evidence has indicia of
5 reliability," however, "the determination of the relevance and weight to be afforded the
6 evidence is generally for ANSAC to make." *Id.* at 243, ¶ 31.

7 14. "Navigability must be assessed as of the time of statehood, and it concerns
8 the river's usefulness for 'trade and travel,' rather than for other purposes." *PPL*
9 *Montana*, 132 S. Ct. 1215 at 1233.

10 15. "Mere use by initial explorers or trappers, who may have dragged their
11 boats in or alongside the river despite its nonnavigability in order to avoid getting lost, or
12 to provide water for their horses and themselves, is not itself enough." *PPL Montana*, 132
13 S. Ct. 1215 at 1233.

14 16. A finding of navigability must be founded on the kind of trade and travel on
15 water that constitutes "a commercial reality." *PPL Montana*, 132 S.Ct. 1215 at 1234.

16 17. In its most recent and definitive treatment of the federal test for navigability
17 for title, the Supreme Court expressly reaffirmed that it is evidence of susceptibility to
18 commercial use that must be considered in evaluating navigability. *PPL Montana v.*
19 *Montana*, 132 S.Ct. 1215, 1233 (2012).

20 18. The United States Supreme Court has held that evidence of navigability
21 "must be confined to that which shows the river could sustain the types of commercial use
22 that, as a realistic matter, might have occurred at the time of statehood." 132 S. Ct. at
23 1233. The Court has further held that "present day recreational use of the river did not
24 bear on navigability," and that "reliance upon the State's evidence of present-day,
25 recreational use, at least without further inquiry, was wrong as a matter of law." *Id.* at
26 1234.

27 19. The Supreme Court of the United States rejected a lower court ruling that
28 the Madison River in Montana was navigable because the lower court had relied primarily

1 on evidence of modern-day boating. 132 S. Ct. 1215 at 1234. While the Supreme Court
2 noted that such evidence could be considered, it would only support a finding of
3 navigability if “[a]t a minimum, ... the party seeking to use present-day evidence for title
4 purposes” can show that “(1) the watercraft are meaningfully similar to those in
5 customary use for trade and travel at the time of statehood; and (2) the river’s post-
6 statehood condition is not materially different from its physical condition at statehood.”

7 *Id.*

8 20. When it held in *PPL Montana* that the Montana Supreme Court erred in
9 relying on evidence of modern recreational boating, the United States Supreme Court
10 recognized that “[m]odern recreational fishing boats, including inflatable rafts and
11 lightweight canoes or kayaks, may be able to navigate water much more shallow or with
12 rockier beds than the boats customarily used for trade and travel at statehood.” *PPL*
13 *Montana*, 132 S. Ct. at 1234.

14 21. The Commission finds that the proponents of navigability have failed to
15 demonstrate that the modern recreational boats that are used for recreational purposes on
16 the Upper Salt River are meaningfully similar to the crafts customarily used for trade and
17 travel at the time of Arizona’s statehood.

18 22. Accordingly, the Commission also finds that recent recreational use of the
19 Upper Salt River in modern recreational watercraft is unpersuasive evidence concerning
20 whether the Upper Salt River was navigable in its ordinary and natural condition under
21 *The Daniel Ball* test.

22 23. The Commission finds that Mr. Fuller’s approach to evaluating navigability
23 – that, if a stream is deep enough to float a boat, it is navigable – is inconsistent with *The*
24 *Daniel Ball* test and binding United States Supreme Court precedent, including *PPL*
25 *Montana*, 132 S. Ct. at 1233. Mr. Fuller testified that he would only lean towards
26 concluding that a stream is non-navigable if the stream is uniformly less than 6 inches in
27 depth. That is not the appropriate standard. Instead, the inquiry is whether “the river
28 could sustain the types of commercial use that, as a realistic matter, might have occurred

1 at the time of statehood.” *PPL Montana*, 132 S. Ct. at 1233. Navigability must be
2 founded on the kind of trade and travel on water that constitutes “a **commercial** reality.”
3 *Id.* at 1234 (emphasis added).

4 24. The Commission finds that the Upper Salt River was not actually used as a
5 “highway for commerce.”

6 25. While the absence of commercial navigation is not dispositive “where
7 conditions of exploration and settlement explain the infrequency or limited nature of such
8 use,” *United States v. Utah*, 283 U.S. 64, 82 (1931), the Commission finds that there were
9 clear needs to use the Upper Salt River as a highway for commerce – if it had been viable
10 for such purposes – in the early years of settlement before diversions had meaningfully
11 impacted the river.

12 26. The Commission finds that the Upper Salt River was not, in its ordinary and
13 natural condition at the time of statehood, susceptible to being used as a “highway for
14 commerce.”


15 27. Based on the historical and scientific data and information, documents, and
16 other evidence considered by the Commission, the Commission finds that the Upper Salt
17 River, in its ordinary and natural condition, was not used or susceptible to being used as a
18 highway for commerce as of February 14, 1912 and therefore was not navigable as
19 defined in A.R.S. §37-1101(5).

20 RESPECTFULLY SUBMITTED this 17th day of August, 2016.

21 SNELL & WILMER L.L.P.

22 L. William Staudenmaier
23 *Attorneys for Freeport Minerals*
24 *Corporation*

25 FENNEMORE CRAIG, P.C.

26 By 
27 Sean T. Hood
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1 MAILING CERTIFICATE

2 ORIGINAL AND SIX COPIES of the foregoing
3 sent via U.S. mail for filing this 17th day of August, 2016 to:

4 Arizona Navigable Stream Adjudication Commission
5 1700 West Washington, Room B-54
6 Phoenix, AZ 85007

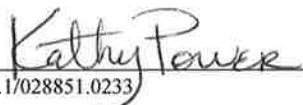
7 COPY sent via e-mail this 17th day of August, 2016 to:

8 George Mehnert
9 Director
10 nav.streams@ansac.az.gov

11 Microsoft Word COPY sent via e-mail this 17th day of August, 2016 to:

12 Matthew Rojas, Esq.
13 Counsel for the Commission
14 matthew.rojas@squirepb.com

15 COPY sent via e-mail this 17th day of August, 2016 to each
16 party on the mailing list (see <http://www.ansac.az.gov/parties.asp>)
17 for *In re Determination of Navigability of the Salt River*

18 By: 
19 11929860.1/028851.0233