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**BEFORE THE ARIZONA NAVIGABLE STREAM  
ADJUDICATION COMMISSION**

IN RE: DETERMINATION OF  
NAVIGABILITY OF THE SAN  
PEDRO RIVER

Case No. 03-004-NAV

**FREEPORT-McMoRAN  
CORPORATION'S RESPONSE  
MEMORANDUM**

1 Freeport-McMoRan Corporation (Freeport) hereby responds to the opening  
2 memorandum filed by the Arizona Center for Law in the Public Interest (Center). The Center  
3 is the only entity to assert that any portion of the San Pedro River was navigable in its  
4 ordinary and natural condition.<sup>1</sup> However, the Center entirely ignores the extensive and  
5 compelling evidence presented by Freeport and others that demonstrates that the San Pedro  
6 River was not navigable in its ordinary and natural condition at or before statehood. In  
7 particular, the Center ignores Mr. Burtell's analysis and testimony, as well as Mr. Gookin's –  
8 neither expert is even mentioned in the Center's opening memorandum.

9 Furthermore, the Center attempts to rewrite *The Daniel Ball* test by striking out the  
10 "highway for commerce" component of the test. The Center's position is irreconcilable with  
11 binding United States Supreme Court precedent, including *PPL Montana v. Montana*, 132  
12 S.Ct. 1215, 1233 (2012). The Supreme Court expressly stated in *PPL Montana* that it is  
13 evidence of susceptibility to *commercial* use that must be considered in evaluating  
14 navigability. *Id.* (holding that "evidence must be confined to that which shows the river  
15 could sustain the kinds of commercial use that, as a realistic matter, might have occurred at  
16 the time of statehood."). The Center simply ignores *PPL Montana* while arguing that any  
17 stream with enough water to float a modern recreational canoe meets *The Daniel Ball* test.<sup>2</sup>

18 The Center's reliance on water depths sufficient to float a modern recreational canoe  
19 are inconsistent with *PPL Montana*, and the evidence and testimony presented by Messrs.  
20 Burtell and Gookin demonstrate convincingly that the San Pedro was not susceptible to  
21 navigation in its ordinary and natural condition at or before statehood.

22 **I. THE CENTER DISREGARDS BINDING PRECEDENTS ESTABLISHING**  
23 **THAT *THE DANIEL BALL* TEST REQUIRES THAT THE STREAM HAVE**  
24 **BEEN SUSCEPTIBLE FOR USE AS A HIGHWAY OF COMMERCE.**

25 The Center made no attempt to apply Mr. Hjalmarson's conclusions outside of the

26 <sup>1</sup> The Center represents Defenders of Wildlife, Donald Steuter, Jerry Van Gasse, and Jim  
27 Vaaler (collectively, Center). Both Mr. Hjalmarson and the Center concede that the San  
28 Pedro was not navigable in its ordinary and natural condition at or before statehood from the  
international border downstream to the Lewis Springs area.

<sup>2</sup> The Center's lone citation to *PPL Montana* appears on the final page of its memorandum in  
connection with the Center's short segmentation discussion.

1 context of modern recreational canoes and modern recreational canoeing standards. Instead,  
2 the Center devotes a substantial portion of its opening memorandum to attempting to  
3 convince the Commission that the “highway for commerce” component of *The Daniel Ball*  
4 test should be disregarded.<sup>3</sup> The Center’s attempt to render the “highway for commerce”  
5 requirement meaningless or superfluous cannot be reconciled with the vast body of binding  
6 precedent on navigability for title in the equal-footing doctrine context,<sup>4</sup> including *PPL*  
7 *Montana*, 132 S. Ct. at 1234 (holding that, because the test is susceptibility to navigation for  
8 commercial uses, “the present day recreational use of the river did not bear on navigability for  
9 purposes of title under the equal-footing doctrine.”)<sup>5</sup> and *State of Arizona v. Arizona*  
10 *Navigable Stream Adjudication Comm.*, 224 Ariz. 230, 241, 229 P.3d 242, 253, ¶¶ 24-25  
11 (App. 2010) (“ANSAC”) (“[W]e interpret statutory language in a way that gives meaning to  
12 each word and clause, and avoids making any part of a statute superfluous, contradictory,  
13 void, or insignificant.”). The Commission must give meaning to the phrase “highway for  
14 commerce,” and may not disregard this term as the Center attempts to do.

15 The Center presented no evidence to the Commission that “trade and travel could have  
16 been conducted ‘in the customary modes of trade and travel on water’” at or before statehood  
17 “‘in [the San Pedro’s] natural and ordinary condition.’” *PPL Montana*, 132 S. Ct. at 1233  
18 (quoting *United States v. Utah*, 283 U.S. 64, 76, 51 S. Ct. 438, 441 (1931)). Evidence of  
19 modern recreational uses may only be considered “to the extent it informs the historical  
20 determination whether the river segment was susceptible of use for *commercial navigation* at  
21 the time of statehood.” *Id.* This is because “[m]odern recreational fishing boats, including  
22 inflatable rafts and lightweight canoes or kayaks, may be able to navigate waters much more  
23 shallow or with rockier beds than the boats customarily used for trade and travel at

24 <sup>3</sup> See generally Center Mem. at 15-19.

25 <sup>4</sup> The Center asserts that “in considering the issue of ‘commerce,’ it is important to  
26 distinguish between cases involving navigability under the Commerce Clause and cases  
27 involving navigability for title.” Mem. at 17. *PPL Montana*, along with a multitude of other  
28 equal-footing doctrine cases, establishes beyond any reasonable dispute that the “highway for  
commerce” requirement is a component of the navigability for title test.

<sup>5</sup> See also *PPL Montana* at 1233 (recognizing that stream segments are deemed navigable “if  
they ‘[were] susceptible of being used,’ as **highways of commerce** at the time of statehood.”)  
(emphasis added) (quoting *United States v. Utah*).

1 statehood.” *Id.* at 1234. “At a minimum, therefore, the party seeking to use present-day  
2 evidence for title purposes must show” that “the watercraft are meaningfully similar to those  
3 in customary use for trade and travel at the time of statehood.” *Id.* at 1233.

4 The Center has failed to make this showing that the Supreme Court requires before  
5 evidence of recreational boating may be considered. Mr. Hjalmarson relied upon recreational  
6 boating standards specifying the minimum depths required for modern recreational canoes,  
7 and he made no effort to correlate these standards with depths required for “the boats  
8 customarily used for trade and travel at statehood.” *PPL Montana*, 132 S. Ct. at 1234. This  
9 is a two-fold evidentiary failure. First, the Center made no showing that recreational boating  
10 standards have any applicability in the context of “commercial navigation at the time of  
11 statehood.” *Id.* at 1233.<sup>6</sup> Commercial uses require a deeper draft than recreational uses.<sup>7</sup>  
12 Consequently, the federal boating standards for modern recreational canoes relied upon by  
13 Mr. Hjalmarson stand in stark contrast to the federal standards for commercial watercraft,  
14 which at the time of statehood specified a minimum of 6-9 feet of depth for commercial  
15 navigation.<sup>8</sup> Mr. Hjalmarson conceded that a watercraft’s draft increases in connection with  
16 commercial navigation involving equipment, goods, or passengers of various sizes, yet he did  
17 not undertake any evaluation concerning the degree to which these commercial activities  
18 would require increased depths relative to the recreational standard that he relied upon.<sup>9</sup>

19 Second, the Center also failed to demonstrate that modern recreational watercraft  
20 considered in the recreational boating standards used by Mr. Hjalmarson are equivalent to the  
21 boats customarily used for trade and travel at statehood. Absent the required demonstration  
22 that modern recreational watercraft are “meaningfully similar” to “the boats customarily used  
23 for trade and travel at statehood,” as a matter of law it is impermissible to rely upon the type  
24 of evidence presented by the Center and Mr. Hjalmarson. *PPL Montana*, 132 S. Ct. at 1233-

25 <sup>6</sup> June 7 Trans. 50:6-25.

26 <sup>7</sup> June 7 Trans. 50:6-25; Aug. 1 Trans. 65:1 – 67:9; Special Master’s Report at 180 (“[T]he  
27 physical characteristics of [the San Juan] ... make it impossible that boats could be navigated  
28 practically or safely for commercial purposes. The evidence as to depth makes it clear that  
boats with a draft of two feet could navigate not more than half the year...”).

<sup>8</sup> Gookin PowerPoint, Exh. X008; Aug. 2 Trans. 155:24 – 156:10.

<sup>9</sup> June 7 Trans. 50:6-25.

1 34 (holding that “reliance upon the State’s evidence of present-day, recreational use” was  
2 wrong as a matter of law where “[t]he court did not find the watercraft similar to those used at  
3 the time of statehood, and the State’s evidence of present-day use for recreational fishing did  
4 not indicate what types of boats are now used.”). Accordingly, the Center has failed to meet  
5 its burden of proof, and the San Pedro must be deemed non-navigable.

6 Moreover, the evidence affirmatively establishes that modern recreational canoes vary  
7 greatly from boats customarily used for trade and travel at statehood.<sup>10</sup> While a foot of depth  
8 may be sufficient to float some modern recreational craft – which Mr. Hjalmarson testified  
9 require *a mere 2-4 inches of draw*<sup>11</sup> – that depth is woefully inadequate for boats that were  
10 customarily used for trade and travel in that era. As described by the Special Master in  
11 discussing the Green, Colorado, and San Juan Rivers, boats that were customarily used for  
12 trade and travel at that time<sup>12</sup> required significantly more draw:

13 row-boats ... drawing 6-12 inches; row-boats ... drawing 14-18 inches; steel  
14 rowboats ... drawing 7-19 inches; motor boats ... drawing 10 inches to 2½  
15 feet; row-boats ... drawing 15-18 inches; scows ... drawing 8 inches; and the  
16 large barge of the Moab Garage Company ... drawing up to 20 inches when  
loaded.... Such commercial navigation would seem to be conducted  
according to the “customary modes of trade and travel on water.”<sup>13</sup>

17 These boats customarily used for trade and travel during the era in which Utah and Arizona  
18 were admitted as states require significantly greater draw than Mr. Hjalmarson’s modern  
19 recreational canoes. They therefore could not have been navigated on the San Pedro in its  
20 ordinary and natural condition even if Mr. Hjalmarson’s depth calculations were correct.<sup>14</sup>

## 21 **II. THE CENTER SIMPLY IGNORES THE NUMEROUS SIGNIFICANT FLAWS** 22 **IN MR. HJALMARSON’S MODEL AND ANALYSIS.**

23 The Center relies heavily upon Mr. Hjalmarson’s analysis and opinions. Despite this

24 <sup>10</sup> See, e.g., Aug. 2 Trans. 177:1 – 178:2; Special Master’s Report at 117-118.

25 <sup>11</sup> June 7 Trans. 47:21 – 48:7.

26 <sup>12</sup> Utah and Arizona were both admitted in the same period. Utah was admitted as the forty-  
fifth state in 1896, and Arizona was admitted as the forty-eighth state in 1912.

27 <sup>13</sup> Special Master’s Report at 117-18.

28 <sup>14</sup> Indeed, while the Special Master determined that these crafts could be navigated on the  
Green River and the Colorado River, they could not be navigated on the San Juan, despite the  
river having depths between one and three feet “for 219 days” each year, and for the other  
“146 days a depth of over three feet.” 1930 Special Master’s Report at 167.

1 reliance, however, the Center ignores the numerous flaws in Mr. Hjalmarson's model and  
2 analysis. These flaws are discussed in detail in Freeport's Opening Memorandum on pages  
3 11-20, and they were addressed at length by Messrs. Burtell and Gookin during the hearing.  
4 In brief summary: Mr. Hjalmarson applied the wrong navigability standard (just as the Center  
5 has done); he used erroneous data inputs, his width equation yields erroneous results (at least  
6 for the San Pedro); his depth equation erroneously assumes a smooth parabolic channel; and  
7 Mr. Hjalmarson's model does not calibrate, *i.e.*, its theoretical results do not match real world  
8 empirical data. The Center was not unaware of these issues when it filed its opening  
9 memorandum – these significant flaws were examined in detail during the hearing. The  
10 Center's decision to ignore these critical issues reflects the weakness of the Center's position.

11 **III. THE CENTER PROVIDES AN INCOMPLETE AND MISLEADING**  
12 **DEPICTION OF THE SAN PEDRO.**

13 **A. The Center's Own Evidence Establishes That the San Pedro Was**  
14 **Discontinuous in Its Ordinary and Natural Condition.**

15 The Center continues to assert, in the face of multiple independent lines of evidence to  
16 the contrary, that the San Pedro was perennial throughout its entire reach. While a finding  
17 that the San Pedro was continuous would not undermine the evidence demonstrating that the  
18 stream was not navigable in its ordinary and natural condition,<sup>15</sup> a finding that the San Pedro  
19 was discontinuous would be devastating to the Center's position in two respects. First,  
20 discontinuity is a serious impediment to navigation in fact – you cannot navigate where there  
21 is no water – and discontinuity is indicative of low flows and shallow depths. These are  
22 strong indicators that a stream is not navigable under *The Daniel Ball* test. Second, the San  
23 Pedro's discontinuity provides additional independent confirmation that Mr. Hjalmarson's  
24 model is unreliable. Mr. Hjalmarson's model and derivative flow duration curves depict a  
25 river that is perennial throughout in its ordinary and natural condition. This is yet another  
26 showing that Mr. Hjalmarson's model simply does not calibrate and is therefore unreliable.

27 The Center and Mr. Hjalmarson rely heavily on the USGS Hydrologic Atlas 664 in

28 <sup>15</sup> A stream with insufficient depths and low, variable flows that is also riddled with significant impediments is non-navigable whether it is perennial throughout or not.

1 asserting that the San Pedro was perennial throughout.<sup>16</sup> However, the groundwater budget  
2 for Hydrologic Atlas 664 demonstrates very clearly that there was no base flow contribution  
3 at multiple points along the San Pedro. A southwestern stream cannot be perennial in areas  
4 where it has no base flow contribution, and Hydrologic Atlas 664 therefore demonstrates that  
5 the San Pedro was ephemeral or intermittent at multiple locations.<sup>17</sup>

6 The foundational sources to Hydrologic Atlas 664 provide additional confirmation that  
7 the Center's reliance is misplaced. The Brown and Others map<sup>18</sup> is foundational to both the  
8 Hydrologic Atlas 664 and the Hendrickson and Minckley map,<sup>19</sup> and Brown and Others  
9 clearly shows that the San Pedro was ephemeral or intermittent in certain locations in its  
10 ordinary and natural state.<sup>20</sup> Likewise, the Ecology and Conservation report describes the  
11 San Pedro as "interrupted, spatially intermittent in the lower reaches with the dry  
12 discontinuities outdistancing limited surface water flow from groundwater outcroppings."<sup>21</sup>  
13 However, perhaps the most compelling evidence of the San Pedro's discontinuity comes from  
14 historical accounts during a time when the San Pedro was in its natural and ordinary  
15 condition. These accounts clearly depict a stream that was not perennial in certain locations.<sup>22</sup>

16 The Center also relies on historical accounts. However, the Center's reliance is  
17 selective and misleading. The Center recounts Pattie's use of a canoe, but without  
18 acknowledging that this attempted voyage – whether on the San Pedro or the Gila – was  
19 during a time of extraordinary stream flow.<sup>23</sup> Similarly, the Center attributes an observation  
20 of two and a half feet of depth to Sylvester Mowry in 1864 when, in fact, this observation was

21 <sup>16</sup> See, e.g., Center Memo. at 4.

22 <sup>17</sup> The Center also asserts on page 5 that "[t]he presence of dark paleosoils indicates that the  
23 pre-development San Pedro had stream flow along its entire reach ..." This conclusion is  
24 nonsensical. Observations of dark paleosoils are *localized*, consistent with the evidence  
25 indicating that *portions* of the San Pedro were typified by cienegas and riverine marsh. Aug.  
26 1 Trans. 56:22 – 57:14. It requires a leap in logic to assert that localized observations of dark  
27 paleosoils means that the entire San Pedro must have been perennial. To the contrary, as  
28 Hendrickson and Minckley (1984) reflects, portions of the stream included cienegas and  
29 riverine marsh, while other portions were intermittent or ephemeral.

<sup>18</sup> Exh. X012; see also Hydrologic Atlas 664 (references).

<sup>19</sup> Exh. X007.

<sup>20</sup> Aug. 1 Trans. 250:21 – 256:4; Brown & Others.

<sup>21</sup> Aug. 1 Trans. 259:1 – 261:6.

<sup>22</sup> Burtell Declaration at Table 1; Aug. 1 Trans. 152:17 – 161:9

<sup>23</sup> Aug. 2 Trans. 112:1-12 and 180:17 – 181:3.

1 made by Bartlett in 1851 during a time when the river was running “high,” *i.e.* at or near  
2 flood stage and not in its ordinary condition. Moreover, Bartlett’s initial observation was two  
3 feet, not two and a half feet.<sup>24</sup> The Center also avows that “the record includes numerous  
4 examples of modern day boating” on the San Pedro, but does so without citation to the  
5 record. In fact, the record establishes that every recorded instance of isolated boating on the  
6 San Pedro occurred when the stream was at or near flood stage, *i.e.* when the San Pedro was  
7 not in its ordinary condition.<sup>25</sup> The truth is that every historic account of the San Pedro in its  
8 ordinary and natural condition depicts a small, shallow stream that was neither navigated nor  
9 susceptible to navigation.

10 **B. The Center Fails to Provide any Evidence That the San Pedro Was not in**  
11 **its Ordinary and Natural Condition from 1850 to 1870.**

12 As Mr. Burtell described during the hearing, the historical evidence clearly  
13 demonstrates that Native American, Spanish, and Mexican diversions ceased prior to 1840,  
14 and that the 1840s up to the 1870s was therefore a time in which there were few if any  
15 diversions affecting the San Pedro. The San Pedro was therefore in its ordinary and natural  
16 condition during this time. *See, e.g., ANSAC*, 224 Ariz. at 242, 229 P.3d at 254 ¶30.

17 The Center asserts that the San Pedro “has been significantly affected at least in part  
18 by humans since about 1850.” The Center, however, cites to Ecology and Conservation p.  
19 259 for this proposition.<sup>26</sup> This chapter of Ecology and Conservation was authored by  
20 Huckleberry in 2009, thirteen years after he wrote the Huckleberry Report that Mr.  
21 Hjalmarson referenced repeatedly during the hearing.<sup>27</sup> Mr. Burtell discussed this chapter at  
22 length during the hearing, and specifically referenced page 259. In this chapter, Huckleberry

23  
24 <sup>24</sup> *See, e.g.,* Burtell Declaration at Table 1 (at Bartlett description in September 1851).  
25 Bartlett added half a foot to the depth when he recounted his observation two years later. His  
26 initial observation is certainly more credible than his recollection years later. Regardless, this  
27 was an observation of the San Pedro when it was not in its ordinary condition.

28 <sup>25</sup> *See, e.g.,* Fuller 1997 at G-7, 8-4, and 8-5.

<sup>26</sup> Center Memo. at 5.

<sup>27</sup> As discussed in detail in Freeport’s opening memorandum, the Huckleberry Report  
provides no basis to conclude that the localized observations of entrenchment in the 1850s  
timeframe were anything other than a natural occurrence, or that the entrenchment did not  
date back to the 1690s or earlier.

1 addresses the period of significant entrenchment that began in the late 1800s and the  
2 uncertainty concerning the factors that contributed to this late period of entrenchment.<sup>28</sup> Mr.  
3 Burtell concluded his discussion of Huckleberry's works as follows:

4 Q. It doesn't sound to me that Huckleberry is opining that any entrenchment  
5 that occurred prior to 1850 was attributable to human impacts?

6 A. Not only does he say that, but the entrenchment that occurred later, starting  
7 in the late 1800s and going into 1900s, he's not even sure what caused that or  
8 whether humans had any effect on that.

9 Q. And Huckleberry doesn't describe any human impacts that would have  
10 caused entrenchment pre-1850, does he?

11 A. No, he does not. He does not discuss that.<sup>29</sup>

12 Not only are Ecology and Conservation and the Huckleberry Report devoid of any evidence  
13 supporting the Center's claim, there is also no evidence that any entrenchment prior to the  
14 historical accounts relied upon by Mr. Burtell resulted from human impacts.<sup>30</sup>

15 The Center makes additional unsupported assertions in an attempt to justify Mr.  
16 Hjalmarson's reliance on a model rather than historical empirical data. For instance, the  
17 Center asserts that the impacts of "irrigation diversions ... became apparent in the 1850s  
18 ..."<sup>31</sup> This assertion is incorrect. There is no evidence that any meaningful diversions were  
19 occurring in the 1850s that would have any impact on flows. The Center also asserts that  
20 observations of turbid water demonstrate that humans were impacting the river.<sup>32</sup> Even Mr.  
21 Hjalmarson, however, could not support the notion that turbidity necessarily indicates the  
22 existence of human impacts, as he acknowledged that, on any given day, one could observe a  
23 river in its ordinary and natural condition and perceive the water to be turbid.<sup>33</sup>

24 The Center also asserts that the multiple historic accounts of discontinuous flow  
25 demonstrate human impacts on the river.<sup>34</sup> This circular logic is unpersuasive. There is no  
26 evidence of diversions during this timeframe. Instead, the evidence, most of which was

27 <sup>28</sup> Aug. 1 Trans. 142:14 – 147:17 (citing Ecology and Conservation).

28 <sup>29</sup> Aug. 1 Trans. 147:8-17.

<sup>30</sup> Aug. 1 Trans. 147:8-17.

<sup>31</sup> Center Memo. p. 5.

<sup>32</sup> Center Memo. p. 5.

<sup>33</sup> Aug. 1 Trans. 112:4-8.

<sup>34</sup> Center Memo. p. 5.

1 originally presented by the Center,<sup>35</sup> clearly demonstrates that the San Pedro was  
2 discontinuous in its ordinary and natural condition. The Center also mentions herds of feral  
3 cattle, but then appears to acknowledge that the herds had dwindled significantly between  
4 Cook's account in 1846 and Bell's inability to locate the herds in 1854,<sup>36</sup> noting that the herds  
5 "were roaming, wild or otherwise, from 1820-1850."<sup>37</sup> Of course, the historical accounts of  
6 the San Pedro relied upon by Mr. Burtell are all post-1850.

7 The Center also describes purported impacts resulting from the removal of beavers and  
8 their dams "*in the 1880s ...*"<sup>38</sup> It is not clear why this discussion would be included in a  
9 section of the Center's memorandum attempting to demonstrate that the San Pedro "has been  
10 significantly affected at least in part by humans *since about 1850.*"<sup>39</sup> Removal of beaver and  
11 beaver dams are irrelevant to the historic accounts that occurred decades earlier, and there is  
12 certainly no evidence that this could have had any impacts on the stream gauges at Charleston  
13 and Fairbank. Furthermore, the presence of numerous beaver dams is compelling evidence  
14 that natural conditions on the River precluded navigation – they provide no support for an  
15 argument that the River was navigable in its ordinary and natural condition.

16 The Center also alludes to water use at four mining operations. This is yet another red  
17 herring. Like Mr. Hjalmarson, the Center makes no effort to demonstrate any actual impacts  
18 to the 1850s historic accounts of the San Pedro or to the 1904-1911 Charleston and Fairbank  
19 flow data, because no connection can be made. The Center notes that operations began at the  
20 Mammoth Mine, San Manuel, and Cananea in the 1880s<sup>40</sup> – again, decades after Mr. Burtell's  
21 historic accounts. Moreover, the Mammoth and San Manuel operations were in the lower  
22 San Pedro, far removed from the Charleston and Fairbank gauge stations, while Cananea is  
23 40 miles from Charleston and Fairbank. There is no evidence that groundwater impacts could  
24 have migrated that distance in the very short period before the stream flow data were

25 <sup>35</sup> See, e.g., HA664 at Plate 3; Ecology and Conservation; Hendrickson and Minckley (1984).

26 <sup>36</sup> Hendrickson and Minckley (1985), Exh. 12, at 144 ("Wild herds appear to dwindle rather  
quickly...possibly due to hunting by Apaches, military expeditions, and 49ers.").

27 <sup>37</sup> Center Memo. p. 6.

28 <sup>38</sup> Center Memo. at 6 (emphasis added)

<sup>39</sup> Center Memo. at 5 (emphasis added)

<sup>40</sup> Center Memo. at 7.

1 collected,<sup>41</sup> and the Center's own evidence confirms that Cananea's water impacts were  
2 primarily in another country (Mexico) and another watershed (Rio Sonora).<sup>42</sup>

3 **C. The Center Fails to Account for the San Pedro's Significant Impediments.**

4 The Center also fails to account for the significant impediments to navigation present  
5 on the San Pedro in its ordinary and natural condition. The Center acknowledges the San  
6 Pedro's ordinary and natural condition included beavers and beaver dams.<sup>43</sup> However, the  
7 Center fails to even address the tremendous impediment to travel presented by these dams  
8 that were pervasive throughout the San Pedro. Likewise, the Center describes the cienegas  
9 and marshy conditions that existed along portions of the San Pedro, while ignoring the  
10 significant impediments to navigation that these cienegas and riverine marshes presented.<sup>44</sup>  
11 The Center also ignores the riffles, sandbars, and braided channels that posed additional  
12 impediments to navigation. In brief, even if Mr. Hjalmarson's calculations and opinions  
13 concerning depths and recreational boating were valid and applicable, the Center's failure to  
14 meaningfully address the San Pedro's numerous impediments to navigation constitutes an  
15 independent failure to satisfy its burden of proof.

16 **CONCLUSION**

17 Not only has the Center failed to satisfy its burden of proof, but the overwhelming  
18 weight of the evidence clearly demonstrates that the San Pedro was a small, shallow, and  
19 discontinuous stream typified by various impediments, and that the San Pedro was not  
20 susceptible to use as a highway of commerce. Accordingly, Freeport respectfully requests  
21 that the Commission enter a finding that the San Pedro was neither navigable nor susceptible  
22 to navigation in its ordinary and natural condition at or before statehood.

23  
24 <sup>41</sup> Aug. 1 Trans. 201:1 – 206:4.

25 <sup>42</sup> Ecology and Conservation at 222. The Center later asserts that "diversions for Tombstone  
26 mining increased during the period around statehood," which of course postdated both the  
27 historic accounts and the flow data.

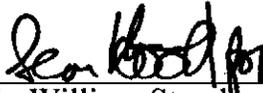
28 <sup>43</sup> Center Memo. at 6.

<sup>44</sup> Hendrickson and Minckley describe cienegas as follows: "Dense stands of sedges and  
charophytes fill shallow, braided channels between pools, or deeper, narrow, vertical-walled  
channels may be heavily vegetated" with various aquatic plants. Hendrickson and Minckley  
(1985) at 133.

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RESPECTFULLY SUBMITTED this 27<sup>th</sup> day of September, 2013.

SNELL & WILMER L.L.P.

By   
\_\_\_\_\_  
L. William Staudenmaier  
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FENNEMORE CRAIG, P.C.

By   
\_\_\_\_\_  
Sean T. Hood  
Attorneys for Freeport-McMoRan  
Corporation

1 MAILING CERTIFICATE

2 ORIGINAL AND SIX COPIES of the foregoing  
3 hand-delivered for filing this 27<sup>th</sup> day of September,  
4 2013 to:

5 Arizona Navigable Stream Adjudication Commission  
6 1700 West Washington, Room B-54  
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