

Stephen H. Long's Unpublished Manuscript Map of the  
United States Compiled in 1820-1822(?)\*

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During the latter half of the eighteenth century geographical exploration of Western North America advanced at a rapid pace and led to a surprising fund of knowledge, some of which has only recently come to light.<sup>1</sup> England, France, Spain and Russia were the principal participants in the drama, the main themes of which were the search for the Northwest and Northeast Passages to the Orient and for the vast riches thought to exist. By the end of the century the advances on all fronts had proved rather conclusively that the North American Continent was indeed a tremendous land mass, a barrier to a direct water route to Asia, though perhaps through it there might be found that conveniently located waterway making transcontinental passage possible. To those who wanted to believe, there appeared to be sufficient proof that the several wide water entrances (e.g., Puget Sound, Columbia River, and San Francisco Bay) led far inland to meet with the rivers, such as the Missouri, draining eastward across the Great Plains and into the Mississippi.<sup>2</sup>

\* Most of the sources used in the preparation of this paper are in the official records of the Federal government in the National Archives in Washington, D.C. The official designation of the principal Record Groups to which they belong are Records of the Office of the Chief of Engineers (RG77) and Records of the Office of the Secretary of War (RG107). When cited hereafter the designation will be simply RG77 and RG107 respectively with appropriate subgroup and series description for each specific citation.

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<sup>1</sup> Among the useful readily available references are Herbert E. Bolton and Thomas M. Marshall, *The Colonization of North America, 1492-1783*, (New York, Macmillan, 1936), 609 pp.; John B. Brebner, *The Explorers of North America, 1492-1806*, (New York, Macmillan, 1933), 502 pp.; Lawrence J. Burpee, *Pathfinders of the Great Plains; A Chronicle of La Verendrye and His Sons*, (Toronto and Glasgow, Brook & Co., 1914), 116 pp.; Idem., *The Search of the Western Seas: The Story of the Exploration of North-Western America*, (Toronto, Macmillan Co. of Canada Ltd., 1935, 2 vols.); Edmund W. Gilbert, *The Exploration of Western America, 1800-1850, An Historical Geography*, (Cambridge, Eng., University Press, 1933), 233 pp.; LeRoy R. Hafen and Carl C. Rister, *Western America; the Exploration, Settlement, and Development of the Region beyond the Mississippi*, (New York, Prentice-Hall Inc., 1941), 698 pp.; John F. McDermott, *The Lost Panoramas of the Mississippi*, (Chicago, University of Chicago Press, 1958), 211 pp.; Abraham P. Nasatir (ed.), *Before Lewis and Clark; Documents Illustrating the History of the Missouri, 1785-1804*, (St. Louis, St. Louis Historical Documents Foundation, 1952), 2 vols.; Reuben G. Thwaites, *A Brief History of Rocky Mountain Exploration, with Especial Reference to the Expedition of Lewis and Clark*, (New York, D. Appleton & Co., 1904), 276 pp.; Reuben G. Thwaites (ed.), *Early Western Travels, 1748-1846; . . .*, (Cleveland, the A. H. Clark Co., 1904-1907), 32 vols., see vols. 14-17; Carl I. Wheat, *Mapping the Trans-Mississippi West, 1540-1861*, (San Francisco, Institute of Historical Cartography, 1957-1963), 6 vols.; and William Winterbotham, *An Historical, Geographical, Commercial and Philosophical View of the American United States and of the European Settlements in America and the West Indies*,

<sup>2</sup> Charles G. Crampton, "The San Buenaventura, the Mythical River of the West," *Pacific Hist. Rev.*, Vol. 25, 2 (1956), pp. 163-171.

Although Thomas Jefferson and other philosophers, naturalists, and politicians in the United States were well aware of the tremendous potential value of the expanse of North America west of the Mississippi River, it was not until 1803 that Jefferson as President of the United States asserted this interest in tangible form.<sup>3</sup> In January 1803 Jefferson's report to Congress revealed his primary geographical interest in the West and requested approval to send an exploring expedition toward the Pacific Ocean, ostensibly to trade with the Indians.<sup>4</sup> News of the purchase of Louisiana from France on July 1 of that year<sup>5</sup> changed the complexion and, to some extent, the objectives of his Meriwether Lewis and William Clark Expedition, which between 1803 and 1806 transected the area between the Mississippi River and the Pacific Coast, out first official scientific geographical exploring expedition.<sup>6</sup> Well aware of the importance of having first-hand geographical information about the extensive "plains" area that bisected the continent north-south between the Mississippi River and the Rocky (or Stoney) Mountains, Jefferson dispatched a succession of explor-

<sup>3</sup> For information on Jefferson's scientific competence, especially as the the North American continent, see Adolphus W. Greely, "Jefferson as a Geographer," *The Writings of Thomas Jefferson*, Vol. 13, pp. i-vii, (Washington, D.C., Thomas Jefferson Memorial Association of the U.S., 1904); F. B. Luther, "Jefferson as a Naturalist," *Mag. of Amer. Hist.*, Vol. 13 (1885), pp. 379-390; Edwin T. Martin, *Thomas Jefferson: Scientist*, (New York, H. Schumann, 1952), 289 pp.; Harlow Shapley, "Notes on Thomas Jefferson as a Natural Philosopher," *Amer. Philos. Soc., Proc.*, Vol. 87, 1 (1943), pp. 234-237; and Thomas G. Surface, "Thomas Jefferson: A Pioneer Student of America's Geography," *Amer. Geogr. Soc., Bull.*, Vol. 41 (1909), pp. 743-750.

<sup>4</sup> For the "Confidential" manuscript original see *Original Messages from the Presidents, 7th Congress, 2nd Session*, House of Representatives RG233, 4 pp., in the National Archives, Washington, D.C. For published versions (apparently not accurate transcriptions) see Reuben G. Thwaites, *Original Journals of the Lewis and Clark Expedition, 1804-1806; Printed from the Original Manuscripts in the Library of the American Philosophical Society and by Direction of its Committee on Historical Documents, . . .*, (New York, Dodd, Mead Co., 1904-1905), 8 vols., Vol. 7, pp. 206-208; and *American State Papers, Indian Affairs*, Vol. 1, pp. 684-685, (Washington, Gales & Seaton, 1832-61).

<sup>5</sup> See especially Hunter Miller (ed.), "Treaty for the Cession of Louisiana, signed at Paris, April 30, 1803 . . .," *Treaties and Other International Acts of the United States of America*, Vol. 2, Document 28, pp. 498-511, (Washington, Gov't. Print. Office, D.C., 1931). For the manuscript original see in *General Records of the United States Government* (RG11), in the National Archives in Washington, D.C.

<sup>6</sup> The so-called "official publication" of this expedition is Nicholas Biddle (ed.), *History of the Expedition under the Command of Captains Lewis and Clark, . . . 1804-5-6, . . .*, (Philadelphia, Bradford & Inskeep, 1814), 2 vols. A selection of recent publications of the so-called official records are Elliot Coues (ed.), *History of the Expedition under the Command of Lewis and Clark, . . .*, (New York, F. P. Harper, 1893), 4 vols.; and Reuben G. Thwaites (ed.), *op. cit.* [see footnote 4]. An excellent, scholarly, well-edited publication of the correspondence is Donald D. Jackson (ed.), *Letters of the Lewis and Clark Expedition, with Related Documents, 1783-1854*, (Urbana, Univ. of Illinois Press, 1962), 728 pp, Additional references are John E. Bakeless, *Lewis & Clark, Partners in Discovery*, (New York, W. Morrow, 1947), 498 pp.; Bernard DeVoto (ed.), *The Journals of Lewis and Clark*, (Boston, Houghton Mifflin, 1953), 504 pp.; Herman R. Friis, "Cartographic and Geographic Activities of the Lewis and Clark Expedition," *Journ. of the Wash. Acad. Sci.*, Vol. 44, 11(1954), pp. 338-351; and United States Congress, "Lewis and Clark's Expedition," *American State Papers, Indian Affairs*, Vol. 1, pp. 705-743, (Washington, D.C., Gales & Seaton, 1832-61).

ing expeditions during the period 1803-1806.<sup>7</sup> Jefferson also had the rare good fortune of visits with the eminent Prussian geographer, Alexander von Humboldt, in the White House (then the President's House) in Washington during which he was briefed by him on the geographical intelligence of Spanish America.<sup>8</sup> These were the beginnings of a kind of centralized government geographical intelligence bureau on the American West. Unfortunately, as quickly as these systematically-planned projects began, so indeed they quickly closed out by 1807. Of course, it is true that variant forms of intelligence about the West trickled into the official depositories in Washington.<sup>9</sup> With Jefferson's official passing from the Washington scene, the Federal government had relatively few far-seeing officials who recognized the country's "Manifest Destiny" west of the Mississippi River, that is, until John C. Calhoun became Secretary of War in 1817 and James Monroe was President of the United States (1817-1825).

On March 15, 1817, Major Stephen Harriman Long, who had been employed as a topographical engineer in the northwestern part of the United States during the preceding season, was in Washington. From his hotel he wrote a letter to President Monroe. In his letter he noted that

"I would build a small Steam Boat about 40 feet in length and 7 feet Beam, drawing no more than 14 inches of water. With this I would navigate all the rivers of consequence falling into the Mississippi, meander their courses, and take the Latitude and Longitude of their mouths, and heads of Navigations. I would then ascend the Illinois and pass into the Lakes with

<sup>7</sup> Simultaneously with the Lewis and Clark Expedition Jefferson dispatched other expeditions into the region west of the Mississippi Valley, to explore especially the riverways westward to their headwaters. For excellent references to these see in John F. McDermott (ed.), "The Western Journals of Dr. George Hunter, 1796-1805," *Amer. Philos. Soc., Trans.*, Vol. 53, 4 (1963), pp. 1-133. In addition to Hunter there were surveys by William Dunbar (with Hunter), John Sibley and Zebulon Montgomery Pike. Of these, Pike's exploration of the Mississippi River to its source in 1804-1805 and to the American Southwest in 1805-1806 was perhaps the most important. For a scholarly definitive work on Pike, see Donald D. Jackson, *The Journals of Zebulon Montgomery Pike* (Norman, Univ. Of Oklahoma Press), 2 vols.

For a good general overview of these expeditions see [Thomas Jefferson], *Message from the President of the United States Communicating Discoveries Made in Exploring the Missouri, Red River, and Washita, by Captains Lewis and Clark . . . Feb. 19, 1806. . . .* Printed by Order of the Senate, Washington, 1806), 178 pp. For the original see in *Records of the United States Senate*, RG46, in the National Archives in Washington, D.C.

<sup>8</sup> For a history of Humboldt's visit and the geographical intelligence about the West that he gave Jefferson and other top officials of the Federal government see Herman R. Friis, "Alexander von Humboldt's Visit to Washington, D.C., June 1 through June 13, 1804," *Records of the Columbia Hist. Soc.*, 1960-1962, (Washington, D.C., 1963), pp. 1-36. For an account of Humboldt's visit with the scientists in Philadelphia, Washington and in Lancaster, Pennsylvania, see Herman R. Friis, "Alexander von Humboldt's Besuch in den Vereinigten Staaten von Amerika vom 20. Mai bis zum 30. Juni 1804," in *Alexander von Humboldt Studien zu seiner universalen Geisteshaltung*, Herausgegeben von Joachim H. Schultze für die Gesellschaft für Erdkunde zu Berlin, (Berlin, 1959), 277 pp., see pp. 142-195.

<sup>9</sup> See especially in the *Records of the Office of the Chief of Engineers* (RG77) and *Records of the Office of the Secretary of War* (RG107) in the National Archives in Washington, D.C.

my Boat, which may be easily done in time of high water. I would reconnoiter the coasts of the Lakes, explore the waters falling into them, and take the Latitude and Longitude of all important places. By these means, the courses and relative positions of the rivers may be ascertained, and a correct Plan of the country may be made, with less trouble and expense, probably than by any other method that would be devised."<sup>10</sup>

Long's cursory topographical surveys of the Missouri-Mississippi<sup>11</sup> waterways in 1817 convinced him of the need of a scientific approach to establishing a network of astronomical and geodetic observations, describing the environment, and mapping the terrain. Late in 1817 Major Long was directed by Secretary of War John C. Calhoun to organize and command an expedition which was to

"... explore the country between the Mississippi and the Rocky Mountains ...

"... explore the Missouri and its principal branches, and then in succession, Red River, Arkansas, and Mississippi, above the mouth of the Missouri ..."<sup>12</sup>

This expedition was popularly referred to as the "Yellowstone Expedition."<sup>13</sup> A military force, under Colonel Henry Atkinson, was to accompany the scientific force which was commanded by Major Long.

Long's earlier explorations, his topographical know-how, and his confidence in the steamboat for river travel were a substantial background for adequate planning. During the winter 1818-1819 Long selected his military assistants, his scientists, and his crew. He also prepared the design and specifications of his steamboat the "Western Engineer," which was built in the boat yards in Pittsburgh. Long and his military assistants, Cadet William H. Swift and Lieutenant James D. Graham, visited the best instrument-makers and military stores in the East in search of the most reliable instruments available. Long also built up a library of books

<sup>10</sup> Part of letter from Major Stephen H. Long to James Monroe, dated Washington Hotel, March 15, 1817, in *Letters Received*, L-46(10), RG 107.

<sup>11</sup> For an account of Long's explorations and observations see especially his "Voyage in a Six-oared Skiff to the Falls of Saint Anthony in 1817," *Minn. Hist. Soc., Coll.*, Vol. 2 (1860), pp. 9-88.

<sup>12</sup> These orders are published in Edwin James (comp.): *Account of an expedition from Pittsburgh to the Rocky Mountains, performed in the years 1819 and '20, by order of the Hon. J. C. Calhoun, sec'y of war; under the command of Major Stephen H. Long. From the notes of Major Long, Mr. T. Say, and other gentlemen of the exploring party. Comp. by Edwin James, botanist and geologist of the expedition . . .*, (Philadelphia, Carey & Lea, 1823), 2 vols. and atlas, Vol. 1, Preliminary Notice, p. 3.

<sup>13</sup> For a good appraisal of the accomplishments see Hiram M. Chittenden: *The American Fur Trade of the Far West; a History of the Missouri Valley and the Rocky Mountains . . .*, (New York, R. R. Wilson, 1936), 2 vols.; and his *History of Early Steamboat Navigation on the Missouri River; . . .*, (New York, F. P. Harper, 1903), 2 vols.

<sup>14</sup> See for example "Return of Books and Instruments in the Possession of Major S. H. Long, U. S. Engineer, Jan. 1, 1820" in *Monthly Reports from Officers, 1820-1830*, RG77, 5 pp. Most of the forty-three publications he lists concern exploration of North America and astronomical and geodetic observations and surveying. He lists twenty-three different instruments such as measuring tapes, thermometers, chronometers, theodolites, sextants and artificial horizons. All of these items probably were at that time aboard the "Western Engineer" or in Long's quarters in the cantonment at Council Bluffs and were essential to the geographical work of the Expedition.

and scientific publications that would be of value to him and his colleagues.<sup>14</sup>

### THE EXPLORING EXPEDITION: 1819-1820

The route and the composition of the area covered by the Expedition are rather well-known and have been described and discussed in several fundamental recent publications.<sup>15</sup>

On May 3, 1819, the Exploring Expedition commanded by Long departed Pittsburgh in Long's specially designed and constructed steamboat, the "Western Engineer." Progress of the "Western Engineer" down the Ohio to its confluence with the Mississippi up the Mississippi to St. Louis and then up the Missouri to Council Bluffs proved to most authorities that the steamboat as a river craft in low water was definitely not the vehicle for the expedition's movement of cargo and troops.<sup>16</sup> The scientists complained bitterly about the infrequency with which they were permitted to carry out land surveys and scientific exploration.<sup>17</sup> Doctor William Baldwin, botanist on the Expedition, died on August 31 (or September 1).<sup>18</sup>

The Expedition reached the camp of the United States troops near Council Bluffs on September 19, and constructed a winter quarters nearby, which was named "Engineer Cantonment."<sup>19</sup> On October 11, Major Long, Major Biddle, and Mr. Jessup

"... took leave of their friends at Engineer Cantonment, and, accompanied by several other person, descended the Missouri in a canoe, on their way toward Washington and Philadelphia . . ."<sup>20</sup>

Before his departure Long issued orders to the resident "scientific staff," covering the work that was to be accomplished during the winter.<sup>21</sup> This resident staff was perhaps the first official United States Government professional corps to establish a scientific station and to conduct sys-

<sup>15</sup> Official reports and letters were sent to his superiors in the War Department by Long during the course of his voyage to Council Bluffs, often as progress reports. See for example his letters to Secretary of War John C. Calhoun dated Pittsburgh April 20, 1819, June 25, 1819, July 19, 1819, and October 28, 1819 in *Letters Received*, RG107. For the official published account see Edwin James (comp.): *op. cit.* [see footnote 12]; the London edition 1823 is reprinted by Reuben G. Thwaites (ed.), *Early Western Travels . . . op. cit.* [see footnote 1].

<sup>16</sup> See for example a copy of J. D. Graham's letter to S. H. Long dated Engineer Cantonment Nov. 20, 1819 with S. H. Long's letter to the Secretary of War dated Washington Jan. 22, 1820 in *Letters Received*, L-59 (13), RG107, 6 pp.

<sup>17</sup> See in letter from W. Baldwin to William Darlington, dated Franklin (Missouri Territory) July 22, 1819, in William Darlington (comp.), *Reliquiae Baldwinianae: . . .*, Phila, Pa., 346 pp., see pp. 320-321. This was Baldwin's last letter to Darlington.

<sup>18</sup> *Ibid.*, p. 321.

<sup>19</sup> Reuben G. Thwaites, *Early Western Travels . . .*, *op. cit.* [see footnote 1], Vol. 14, p. 221 for the official record by Edwin James.

<sup>20</sup> *Ibid.*, pp.249-250 for the official record by Edwin James.

<sup>21</sup> *I.e.*, Thomas Say, zoologist; Titian Ramsay Peale, assistant naturalist and artist; Samuel Seymour, landscape painter; and Lieutenant James D. Graham and Cadet William H. Swift, assistant topographers. *Ibid.*, pp. 248-249.

On January 3, 1820, Long sent a comprehensive report of the accomplishments of the Expedition to the Secretary of War.<sup>23</sup> In it he recognized the deficiencies of the steamboat, recommends its return to duty on the lower Missouri and the Ohio and Mississippi Rivers, described the scientific accomplishments of his professional staff, and proposes that the Expedition explore overland from Council Bluff to the Rocky Mountains in 1820.

During Long's stay in the East he conferred and corresponded with his superiors about the changes in the purpose and objectives of his Expedition, obtained new equipment and instruments, and requested and was given additional funds.<sup>24</sup> He was granted the services of Lieutenant John R. Bell of West Point to replace Major Biddle as official journalist, and Dr. Edwin James to take the place of the late William Baldwin. He also devised various forms and texts to be used in recording Indian vocabularies and scientific data.

Long, Bell, and James left Washington early in the spring of 1820, passed through St. Louis in late April, travelled overland and arrived at Engineer Cantonment on May 28.<sup>25</sup> On June 6, the Expedition, with

tematic research west of the Mississippi River. Major Long went first to his home in Philadelphia and then to Engineer Headquarters in Washington to report.<sup>22</sup>

additional personnel, left the Cantonment and headed west overland to ascend the Platte River to its source, to explore the plains and the headwaters of the rivers at the base of the Rocky Mountains, and to return to the Mississippi River at about Cape Girardeau (Missouri) by the Arkansas and Red Rivers. The details of the day-to-day accomplishments of the Expedition are given in the final publication by Edwin James,<sup>26</sup> and in the very recent publication of the long-lost journal of Captain Bell.<sup>27</sup>

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<sup>22</sup> For this change of original plans see in letter from S. H. Long to the Secretary of War, dated St. Louis, October 28, 1819 in *Letters Received*, L139 (13), RG107, 2 pp.

<sup>23</sup> Report from Major Stephen H. Long to the Secretary of War, dated Washington, January 3, 1820 in *Letter Received*, L-55 (13), RG107, 10pp.

<sup>24</sup> See especially letter and enclosures from Major S. H. Long to the Secretary of War, dated Philadelphia, Feb. 8, 1820 in *Letter Received*, L-74 (13) and L-78 (13), RG107, and letter from the Secretary of War to Major S. H. Long, dated Washington, Feb. 29, 1820 in *Register of Letters Sent*, RG107, 2 pp. and July 22, 1820 in *Register of Letters Sent*, RG107, 1 p.

<sup>25</sup> For an account of his trip to and arrival at Council Bluffs and his plans for the expedition see letter from Major S. H. Long to the Secretary of War, dated Engineer Cantonment, June 2, 1820 in *Letter Received*, L-11, RG107.

<sup>26</sup> There are several editions of the work by James. For the first American edition in 1823 see *op. cit.* [see footnote 12]. A somewhat modified form in three volumes was published in London in 1823, and is the edition reproduced by Reuben G. Thwaites in his *Early Western Travels . . .*, *op. cit.* [see footnote 1].

<sup>27</sup> Harlin M. Fuller and LeRoy R. Hafen (ed.), "The Journal of Captain John R. Bell, Official Journalist for the Stephen H. Long Expedition to the Rocky Mountains, 1820," *The Far West and the Rockies Historical Series*, vol. 6, pp. 1-349, (Glendale, The A. H. Clark Co., Calif., 1957).

The professional members of the Expedition returned to Cape Gibardeau on October 12 with a variety of scientific information,<sup>28</sup> such as astronomical observations, topographical surveys, collections of and notes on a large number of specimens in natural science, information on the linguistics, manners, and customs of the Indians, and some rather severe and negative impressions of the terrain indentified on Long's map as "Great Desert"<sup>29</sup> Unfortunately, three soldiers of Captain Bell's party deserted on the headwaters of the Verdegris River and took with them three horses and a variety of items including especially some of the official records of the professional staff.

Early in November the Expedition was disbanded, Major Long and Captain Bell went directly overland to Washington City; Say, Peale, Seymour and Lieutenant Graham departed down-river to New Orleans and then on to Philadelphia by boat; and Lieutenant Swift and Dr. James ascended the Ohio river a short distance in the "Western Engineer," James finally returning to the East from Golconda, Illinois, by horseback.

Following his return to Philadelphia and Washington, Long corresponded with and about his professional colleagues on the Expedition,<sup>30</sup> attended to the appropriate disposition of the "Western Engineer," ar-

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<sup>28</sup> See especially appendices, tables, notes in Edwin James, *op. cit.* [see footnote 12].

<sup>29</sup> For an excellent scholarly account of the history of the geographical meaning of the reference "The Great Desert" and "The Great Plains" see G. Malcolm Lewis, "William Gilpin and the Concept of the Great Plains Region," *Annals Assoc. Amer. Geogr.*, Vol. 56, 1 (1966), pp. 33-51. See also his "Three Centuries of Desert Concepts of the Cis-Rocky Mountain West," *Journ. of the West*, Vol. 4, (1965), pp. 457-468, and "Changing Emphasis in the Description of the Natural Environment of the American Great Plains Area," *Trans. and Papers Inst. British Geogr.*, Vol. 30, (1962), pp. 75-90; and R. C. Morris, "The Notion of a Great American Desert East of the Rockies," *Miss Valley Hist. Rev.*, Vol. 13, (1927), pp. 190-200. Neither Long nor James was favorably impressed with the so-called "Great Plains" as an environment for habitable settlement by man. Long noted that ". . . I do not hesitate in giving the opinion that it is almost wholly unfit for cultivation, . . . This region, however, viewed as a frontier, may prove of infinite importance to the United States, inasmuch as it is calculated to serve as a barrier to prevent too great an extension of our population westward, . . ." as quoted in Reuben G. Thwaites (ed.), *Early Western Travel, . . . , op. cit.* [see footnote 1], p. 20. James referred to the area and noted that ". . . The traveller who shall at any time have traversed its desolate sands, will, we think, join us in the wish that this region may for ever remain the unmolested haunt of the native hunter, the bison, and the jackall," as quoted in *ibid.*, p. 20.

<sup>30</sup> See for example from Major S. H. Long to Secretary of War dated Philadelphia, Feb. 18, 1821 in *Letters Received*, L-75 (13), RG107, 4 pp. Long commended the services of Captain Bell and Lieutenants Graham and Swift in his letters to the Secretary of War dated Philadelphia, Feb. 7, 1821, 2 pp., Feb. 9, 1821, 2 pp., and Feb. 18, 1821, 3 pp., in *Letters Received*, RG07. In his letter dated Department of War, Feb. 23, 1821, 1 p., in *Register of Letter Sent*, 164/119, RG107, the Secretary of War noted that "Bell, Graham, and Swift have been ordered to rejoin their units until June as is reported in the letter of S. H. Long to the Secretary of War, Dated June 5, 1821, 2 pp. in *Letters Received*, RG107.

ranged for the publication of the results,<sup>31</sup> and accounted for expenditures of money and equipment. On February 20, 1821, Long sent to the Secretary of War his "Report of the Western River Expedition . . ."<sup>32</sup>

James was appointed editor of the official narrative of the Expedition, that was published in Philadelphia by Carey and Lea in 1823 in two volumes and an atlas or portfolio.<sup>33</sup> Apparently the official records were given or loaned to James by Long and the several scientists comprising the professional staff of the Expedition for use in preparing the publication.<sup>34</sup> There is little question but that Long, Secretary of War John C. Calhoun, and other responsible officials considered them so valuable that they must be returned to and preserved in the archives of the War Department.<sup>35</sup> Yet, very few of these official records are in the archives of the War Department.<sup>36</sup>

<sup>31</sup> There was a good deal of correspondence between Major Long and his superiors regarding the publication of the narrative and results of his expedition. For his correspondence with the Secretary of War see his letters dated Philadelphia, Oct. 30, 1821, 3 pp., Nov. 3, 1821, 3 pp., Nov. 6, 1821, 4 pp., Dec. 21, 1822, 2 pp., Jan. 3, 1823, 2 pp., and Dec. 24, 1824, 2 pp. in *Letters Received*, RG107; and from the Secretary of War to Major Long dated Department of War, Nov. 17, 1821, 1 p., in *Register Letters Sent*, 449/313, 1p., RG107.

For his correspondence with Major General Alexander Macomb, Chief Engineer, see his letters dated Philadelphia, Sept. 22, 1821, 2 pp., Aug. 1, 1822, 2 pp., Oct. 1, 1822, 2 pp., Nov 1, 1822, 2 pp., Feb. 1, 1823, 2 pp., and Jan. 2, 1823 2 pp. in *Returns of Books and Instruments*, RG77.

For his correspondence with Col. Isaac Roberdeau in the Engineer Dept. in Washington see his letters dated Philadelphia, Oct. 16, 1822, 4 pp., Oct. 26, 1822, 3 pp., Nov. 1, 1822, 4 pp., June 22, 1824 2 pp., and Dec. 17, 1824, 4 pp., in *Miscellaneous Letters Sent and Received. Topographical Engineers, A. Misc. (Roberdeau)*, RG77.

<sup>32</sup> The official manuscript "Report of the Western River Expedition by S. H. Long, T. Engr. to Hon. J. C. Calhoun, Secretary of War, dated Philadelphia, February 20th, 1821," is in *Bulky File, Case 1 Drawer 4, NA Box 13*, in RG77 in the National Archives. It is one red buckram bound volume of 109 pages manuscript and includes an early photograph of Long.

In his letter of July 31, 1821, the Secretary of War informed Long that the two reports by James that Long had sent to him were returned in order that James might have them published in the "Philosophical Society Transactions," but that ". . . when this is done the originals will be returned and be placed on files in the Topographical Office here . . ." in *Register of Letters Sent*, 295/178, RG107, 1 p. Apparently these two items were published as E. P. James, "Catalogue of Plants Collected during a Journey to and from the Rocky Mountains, during the Summer of 1820 . . .," *Trans., Amer. Philos. Soc.*, Vol. 2, (1825), pp. 172-190; and his "Remarks on the Sandstone and Floetz Trap Formations of the Western Part of the Valley of the Mississippi . . ." *ibid.*, pp. 191-215. Apparently these papers were prepared by James during his stopover in Smithland, Kentucky, April, 1821, and were transmitted to Long who communicated them to the Society with the permission of the Secretary of War, John C. Calhoun. They were read before the Society, possibly by Long, who was a member, on August 17, 1821.

<sup>33</sup> Edwin James, *op. cit.* [see footnote 12].

<sup>34</sup> *Op. cit.* [see footnote 32].

<sup>35</sup> See especially Long's official statement as relayed to the Secretary of War from Pittsburgh in his letter of April 20, 1819 in *Letter Received*, 9 pp., see p. 8, RG107. These instructions were issued as an order to members of the party on March 31.

<sup>36</sup> Nearly all, if not all, of the records of the concerned agencies of the War in RG107 and Long and Isaac Roberdeau in RG77.

We know from official records in the National Archives that one of Long's primary activities was the preparation for publication of an account of his Expedition into the West and that Dr. Edwin James had been made responsible for the editorial work.<sup>37</sup> In order to achieve this goal James apparently had been entrusted with as many of the official papers as were available and had the assistance of a number of the leading naturalists, such as Thomas Say and John Torrey.<sup>38</sup> It appears that Long assumed responsibility for the cartographic efforts, which included the compilation of a map of the United States between Washington City and the Rocky Mountains (Fig. 1). This map was to be compiled from a wide variety of sources and especially from the surveys of the Expedition.<sup>39</sup> We do not know precisely what cartographic records were made during the expedition, and we know of only a few that were made during the period thereafter to the date of publication.

In volume two of the Philadelphia, 1823 edition of the Edwin James publication is an appendix dated Philadelphia, 1822, entitled "Astronomical and Meteorological Records, . . . taken on the Expedition . . .," which was prepared by Lieutenant J. D. Graham.<sup>40</sup> In the preface by Graham dated Philadelphia, July, 1821, is a detailed description of the instruments carried and used in taking observations.<sup>41</sup> Significantly, Graham remarks in his enumeration that the Expedition had

" . . . A common surveyor's compass, with a needle six inches long. This instrument was used tracing the course of the Missouri, as laid down on the map of the Country taken by Major Long and Lieutenant Swift — Made by the same."<sup>42</sup>

Graham also notes that

" . . . Part second contains the observations which were made by Major Long and Lieutenant Swift after I separated from them at Engineer Cantonment, and which were afterwards calculated by me while those officers were engaged in projecting maps of the country explored by the Expedition."<sup>43</sup>

Graham also records that

"It is hoped that the following astronomical computations will be found to correct many errors in the geography west of the Mississippi, as laid down even on some of the latest and most approved maps . . ."<sup>44</sup>

Apparently no cartographic work was undertaken during the winter at Engineer Cantonment nor did Long in his assignment of duties so specify.<sup>45</sup> Thwaites mentions that Lieutenant William Henry Swift pre-

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*

<sup>40</sup> Edwin James (comp.), *op. cit.* [see footnote 12], Vol. 2, pp. lxxvii.

<sup>41</sup> *Ibid.*, pp. iii-v.

<sup>42</sup> *Ibid.*, p. iv.

<sup>43</sup> *Ibid.*, p. v. It will be recalled that Lieutenant Graham had been detached from the expedition as officer responsible for the "Western Engineer" in its surveys of the lower Missouri Rivers. The implication in the above quotation is that the maps were those prepared after the expedition returned East.

<sup>44</sup> *Ibid.*, p. vii. Graham refers especially to maps by John Melish and Dr. John H. Robinson (who had been on Zebulon Montgomery Pike's Expedition 1805-06).

<sup>45</sup> *Ibid.*, Vol. 1, pp. 164-166 and pp. 167-198.

pared "the map of the country explored by the expedition . . .,"<sup>46</sup> but this seems to be an inaccurate statement because in Long's official correspondence between 1820 and 1823 he states that he (Long) was preparing this map.<sup>47</sup>

Long began the compilation of his map shortly after his return to Philadelphia in 1820, but a succession of bouts with poor health over several years prevented him from giving his continuous attention to the task.<sup>48</sup> In his letter July 18, 1821, to the Secretary of War he remarks that

"... In consequence [of my health<sup>1</sup>], I have been able to do but very little towards the compilation of my map — No efforts that my health will permit shall be spared in the speedy accomplishment of this object — Under your approbation I should be glad to make arrangements for the publication of the Map which I shall be able to effect in connexion with Mr. Tanner,<sup>49</sup> the celebrated Map-Maker & Engraver of this place—Your instructions upon these points, will be thankfully received . . ."<sup>50</sup>

On July 31, 1821, the Secretary of War stated that

"The decision on the publication of your map is reserved for further consideration. When completed you will report it to this Department when a decision will be made on your request to publish . . ."<sup>51</sup>

Major Isaac Roberdeau of the Topographical Bureau on October 6, 1821, did commission Long to construct "... a Gen'l Map of the U. States on a large scale . . . I thank you for mentioning me as an accomplice in the undertaking, and will be pleased with contributing my mite in enhancing the project . . ."<sup>52</sup> This apparently was to be a joint undertaking in addition to the map engraved for Long's book, and Long probably did most, if not all, of this work. Long indicated the errors in extant maps and suggested that since he had retained minutes of all of his reconnoitering he could

"Frame a sketch of the country on any scale that might be chosen. A Scale of six miles to one inch, would make a Map at least 25 feet square. Half that scale would be large enough to exhibit to advantage on one side of your [Roberdeau's] office, or in that of the Hon. Secretary . . ."<sup>54</sup>

<sup>46</sup> Reuben G. Thwaites (ed.), *Early Western Travels . . .*, *op. cit.* [see footnote 1], Vol. 14, p. 41, note.

<sup>47</sup> Lieutenant Swift had been reassigned to his regiment by June, 1821, as is stated in footnote 30.

<sup>48</sup> Letter from S. H. Long to Isaac Roberdeau, dated Philadelphia, August 24, 1821 in *Miscellaneous Letters Sent and Received, Topographical Engineers*, 3 pp., RG77.

<sup>49</sup> A good biographical sketch may be found in W. L. G. Joerg, "Henry Schenck Tanner (1786-1858)," *Dict. Amer. Biogr.*, Vol. 18, (1936), pp. 296-297; and his "Henry Schenck Tanner of Philadelphia: His place in American Cartography, 1815-1850," *Annals, Assoc. Amer. Geogr.*, Vol. 25, 1 (1935), p. 46.

<sup>50</sup> Letter from S. H. Long to the Secretary of War, dated Philadelphia, July 18, 1821 in *Miscellaneous Letters Sent and Received, By Secretary of War*, 3 pp. RG77.

<sup>51</sup> Letter from the Secretary of War to S. H. Long, dated Department of War, July 31, 1821 in *Register of Letters Sent*, 295/178, 1 p., RG107.

<sup>52</sup> In letter from S. H. Long to Isaac Roberdeau dated Philadelphia, October 7, 1821 in *Miscellaneous Letters Sent and Received (Roberdeau)*, 4 pp., in RG77.

<sup>53</sup> *Ibid.*, p. 3.

<sup>54</sup> *Ibid.*

During the next several years Long spent much of his time in Philadelphia working on a "large map" and with James on the compilation of the account of their Expedition. Long carried on rather extensive correspondence with Isaac Roberdeau in the Topographical Bureau and with Alexander Macomb about his work.<sup>56</sup> He borrowed cartographic and other records from the Bureau in Washington for use in compilation and complained about the inaccuracies of many of the unpublished sources, especially of the location of geographic features on a map in terms of latitude and longitude.

On July 5, 1822, Long informed Isaac Roberdeau in the Topographical Bureau that

"Having nearly completed all my Maps; and my other business connected with the publication of our Book, affording some leisure, I should be able to devote a small portion of my time, in replottting my surveys, on a Scale adapted to the Big Map, we have in contemplation . . ."<sup>56</sup>

The atlas or folio of "Maps and Plates" accompanying the two text volumes of the Philadelphia edition is dated 1822. It appears from this that Long has completed a map or a map in two sheets specifically for this Philadelphia edition of his "Account . . ."<sup>57</sup>

In 1822 Henry S. Tanner copyrighted "A map of North America constructed according to the latest authorities," on a scale of about 120 miles to an inch at latitude 45° N.<sup>58</sup> This map was included in his *A New American Atlas . . .*, published in Philadelphia in 1823. In the remarkably informative introduction entitled "A Geographical Memoir" Tanner described his several sources and in some detail recognizes the valuable assistance of Major Long, especially the topographical information from his 1819-1820 Expedition. Tanner, however, says that

<sup>55</sup> See especially the correspondence files in *Miscellaneous Letters Sent and Received, Topographical Engineers, A. Miscellaneous (Roberdeau), March 1818 - Dec. 1826*, RG77, *Letters Received by the Secretary of War, 1821-1825*, RG107, and *Monthly Personal Reports from Officers, 1820-1830*, RG77.

<sup>56</sup> Letter from S. H. Long to Isaac Roberdeau, dated Philadelphia, July 5, 1822 in *Monthly Personal Reports from Officers, 1820-1830*, 3 pp., RG77.

<sup>57</sup> This atlas bears the subtitle "Maps and Plates," and is dated Philadelphia, 1822. It includes eleven plates, the first two of which are the eastern and the western sheets, together comprising the map. These two sheets match at longitude 92°W. from Greenwich to form one map as reproduced in the London edition (1823). However, the two maps are not precisely the same, as for example the deletion of "Drawn by S. H. Long, Maj. T. Engineers" and the substitution of "Engrav'd by Young & Delleker." The serious student might well question why editors of recent editions of the Account . . . (i.e. in footnotes 1 and 27) have reproduced the London edition of the map rather than the Philadelphia, 1823 edition, which is substantially the first engraving of Long's "original." Careful comparison of each map further reveals rather significant differences in the title, the title block, placement of the Rocky Mountain front, the direction of river courses, and place names.

<sup>58</sup> *A New American Atlas Containing Maps of the Several States of the North American Union, Projected and Drawn on a Uniform Scale from Documents Found in the Public Offices of the United States and State Governments, and Other Original and Authentic Information*, (Philadelphia, 1823), 18 pp. of explanatory text "Geographical Memoir," and 22 plates of colored maps. This is one of the earliest atlases published in the United States and set high standards of scholarship and cartographic presentation. Tanner relied heavily on official Government sources, including S. H. Long.

"From the information collected, and observations later for latitude and longitude at frequent intervals during the progress of this expedition, Major Long constructed so much of his map as related to the region explored by him. The detail for the other parts was taken from my Atlas and other documents. This manuscript map was prepared for the use of the War Department on a scale of twenty-five miles to an inch, it occupies eight large sheets, and and is executed in a style of neatness seldom surpassed . . ."<sup>59</sup>

Lieutenant Gouverneur K. Warren, in charge of the cartographic work in the Office of Surveys and Explorations in the War Department in the 1850's, and well acquainted with the map resources of the Topographical Bureau, compiled a "Memoir . . . giving a brief account of each of the Expeditions since A.D. 1800."<sup>60</sup> In his notice of the Long Expedition of 1819-1820 he refers to the maps in the Atlas accompanying the official "Account" (1832) by Edwin James and says that

"... accompanying the publication is a map, in two sheets, on a scale of 75 miles to an inch, . . . The original map in the Topographical Bureau is one sheet, on a scale of 36 miles to an inch."<sup>61</sup>

It becomes at once apparent upon careful examination of the contents, the form, and the technique of rendering the cartographic presentation of the Philadelphia edition of the map (Figure 1) and the large manuscript map (Figure 2) that they are very different and that indeed the former appears to be based on, but at best only bears a resemblance to, the latter.<sup>62</sup> The former (Figure 1) may well be the engraver's revision or modification of a copy that was given to him by James or Long to engrave. If this is the case, where is the compilation (by Long?) that he used?

The manuscript map in the Office of the Chief of Engineers Headquarters Map Files in the National Archives is indeed on the scale of the manuscript map noted by Warren. It is a unique map and does not appear to have been published with an official Government or any other document. One may well conclude on the basis of internal evidence of this map, such as the lack of reference to Long's Expedition of 1823 and of other subsequent expeditions, that Long completed this map before he

<sup>59</sup> *Ibid.*, pp. 6-7. Tanner concludes this paragraph with a complimentary remark: "Whether we view this map as a work of art merely, or as a representation of an interesting and hitherto unknown part of our country, it cannot fail to augment the well-earned reputation of its accomplished author." Quotation is from p. 7.

<sup>60</sup> See in Gouverneur K. Warren, . . . Memoir to Accompany the Map of the Territory of the United States from the Mississippi River to the Pacific Ocean; Giving Brief Account of Each of the Exploring Expeditions since A.D. 1800 . . ., in U.S. War Department: "Reports of Explorations and Surveys . . ." U.S. 33rd Congress, 2nd Session, Senate Document 78, Vol. 11, pp. 1-120, (Washington, D.C., Gov't Print. Office, 1859).

<sup>61</sup> *Ibid.* This matches well with the facts noted in footnotes 57 and 60.

<sup>62</sup> This manuscript map may be described as follows: "This Map of the Country situated between the Meridian of Washington City and the Rocky Mountains exhibiting the route of the late Exploring Expedition commanded by Maj. Long, together with recent surveys and explorations by himself & others is most respectfully inscribed, by his most obedient and humble servant S. H. Long, Major, U. S. Topl. Engineers . . . To the Hon. John C. Calhoun, Secretary of War . . . Scale of Miles; 36 miles to an inch." Dimensions 54½ x 48¾ inches (edge of map) and 52½ x 46 inches (between neat lines) Manuscript map in color and in ink on paper. Map No. U.S. 62, in *Records of the Office of the Chief of Engineers*, Headquarters Map Files, RG77 in the National Archives, Washington, D.C.

left the East in 1823 on his tour to explore the St. Peters or Minnesota River. Indeed, this may well be the proposed "big map" that was planned, because we have no record of any other and subsequent correspondence between Roberdeau and Long, that refers to the completion of the "big map" as originally planned. Certainly this manuscript map is one of the most valuable maps in the history of early American cartography. It is unfortunate that during these 144 years it has reposed in obscurity in favor of an inferior version.