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Confederate Nitre Bureau Operations In Florida

by MARION O. SMITH

Saltpeter or niter (potassium nitrate), the main ingredient of gunpowder, was essential for the Confederate war effort. To ensure a steady supply, in April 1862 the Confederate Congress passed a bill which created the Nitre Bureau. Its goals were to encourage a more "efficient working of the niter caves" already being mined, to solicit additional contracts for new cave operators or persons leaching earth deposits from underneath buildings, and to establish in the larger towns artificial niter beds. The new bureau was headed by Isaac M. St. John, a former civil engineer, and the South was soon divided into districts, with superintendents assigned to each. Although the focus of the bureau's effort was in the mountainous regions of Virginia, West Virginia, Tennessee, Alabama, Georgia, and Arkansas, all sections of the Confederacy became involved. Florida comprised District No. 12.¹

The first Nitre Bureau official in Florida was Nathaniel A. Pratt, a professor from Oglethorpe University, Milledgeville, Georgia, who apparently worked as the bureau chemist and mineralogist. One pay voucher, however, refers to him as "Sup Nitre Dis Florida." Pratt made only one trip to Florida--May 28-June 27, 1862--when he visited Tallahassee (twice), Quincy, Marianna, Gainesville (twice), Ocala, Newnansville, Lake City, and Madison. On June 8 he hired a buggy and investigated a cave near Marianna.²

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1. United States War Department, *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, 128 vols. (Washington, D.C., 1880-1901), series 4, I, 1054, III, 698 (hereinafter *OR*); *Obituary Record of Graduates of Yale College Deceased from June, 1870 [1860], to June, 1880* (New Haven, 1880), 402.
2. Ralph W. Donnelly, "Scientists of the Confederate Nitre and Mining Bureau," *Civil War History*, 2 (December 1956), 76; *Augusta Daily Constitutional*, June 6, 1862; N. A. Pratt file, Compiled Service Records of Confederate Soldiers Who Served in Organizations Raised Directly by the Confederate Government, Nitre and Mining Bureau, record group 109, M-258, roll 113, National Archives, Washington, DC (hereinafter *NA*).

If Pratt made a report of his Florida exploring excursion, it has not survived. But undoubtedly the essence of his observations was incorporated in St. John's July 31, 1862, report to the Secretary of War: "In Florida the most promising cave localities have been examined, but thus far with unpromising results, the caves being small and generally wet. Attention has therefore been given to plantation earth. The superintendent has commenced work on Government account and already reports a small return."³

The superintendent referred to was Charles H. Latrobe, a Baltimore native, Tallahassee resident, and chief engineer of the Pensacola and Georgia Railroad. By early July he was on duty and published in the *Florida Sentinel* instructions for the manufacture of saltpeter from cave earth or from "under old houses, stables, negro cabins, tobacco houses, & c." By late in the same month he asked for "A limited number of Overseers . . . to enter the Nitre Business" for "\$30 per month and rations," promising them "freedom from conscription." Latrobe's headquarters remained in Tallahassee. On July 17 and throughout the remainder of 1862 he rented an office from William K. Beard, who was then serving as a Confederate staff officer in the Army of Tennessee. For the first half of 1863 he rented an office from former register of public lands John Beard, William K.'s father, and after that from D. W. Gwynn, a lawyer and Confederate captain. Later, for at least a year following July 1, 1863, he rented a "wareroom" from Arvah Hopkins, a New York-born planter-merchant.⁴

Although Latrobe remained Florida's chief Nitre Bureau official throughout the war, he occasionally had assistants, including Perry L. Barrington, John L. McFarlin, Thaddeus W. Hentz and Archibald C. McCants. Except for signing payrolls as a witness, nothing is known of the activities of Barrington, a Wakulla County farmer. McFarlin, an Apalachicola grocer who later moved to Quincy, in October 1862 was reimbursed for hiring wagon and

3. *OR*, ser. 4, II, 29.

4. *Baltimore: Its History and Its People*, 3 vols. (New York and Chicago, 1912), II, 400-402; 1850 Census, Fla., Leon, 8th Div., 71; (1860), Tallahassee, 10, 15, Tallahassee P.O., 5, 16, 29, (1870), Northern Div., 22nd Subdiv., 104; Raleigh *North Carolina Standard*, September 12, 1849; *OR* ser. 4, I, 778-79, II, 436, ser. 2, XXV, part 1, 412; Tallahassee *Florida Sentinel*, July 8, 29, 1862; W. K. Beard, John Beard, D. W. Glynn, and A. Hopkins files, Confederate Papers Relating to Citizens or Business Firms, record group 109, M-346, rolls 51, 388, 465, NA (hereinafter Citizens Papers).

mule teams for carting jobs, one for four days from Mount Pleasant to Midway, and two for twenty-five days each "Hauling earth & c," presumably from plantations, in both Gadsden and Jackson counties. During the same month, Hentz, a Jackson County dentist, signed himself "Asst Sup West Fla." More is known about McCants, a doctor from Monticello. Detailed from the Third Florida Infantry, he was an assistant from at least October 1862 through late May 1863, when he spent much of his time in either Gainesville or Brooksville. He was then transferred to East Tennessee where he was in charge of Division No. 3 of Nitre District No. 8, with an office in Athens. After the Confederates abandoned Chattanooga, he returned to Florida, joined an artillery battery, and was wounded at the battle of Olustee, in February 1864.⁵

The majority of extant records relating to Nitre Bureau activity in Florida pertain to the construction and maintenance of artificial niter beds near Tallahassee. The premise set forth by the wartime literature was that beds would be a permanent source of saltpeter, whereas the leaching of the soil "under dwellings, barns, cattle sheds, and negro cabins" was only a temporary measure. All the kinds of saltpeter producing elements coming within the categories of crude vegetable matter (fodder, melon rinds, rotting fruits and vegetables, peelings), crude earthly materials (lime, marl, plaster of paris, earth from old dwellings or barns), solid animal matters (animal or human dung, carcasses, offal of butcheries), and liquid manures (urine, kitchen waste) were put together in beds underneath protective sheds. The dimensions of the sheds varied from place to place, often thirty by a hundred feet. Under each shed a number of beds or pits were built, twenty-five to thirty, or more, depending on the specific construction of a site. The "form, size, and arrangement of the beds" were the "option of the superintendent." Additional fixtures needed were wagons for hauling and implements such as shovels, rakes, and hoes for "preparing"

5. Confederate Slave Payrolls, Nitre and Mining District 12, October-December 1862, record group 109, NA; Hattie E. Hentz file, Florida Confederate Pension Applications, Florida State Archives, Tallahassee; 1860 Census, Fla., Wakulla, Between Sopchoppy and St. Marks Rivers, 22; Franklin, Apalachicola, 1; Jackson, Marianna P.O., 5; Jefferson, Monticello, 80; (1870), Duval, Jacksonville, 9; Gadsden, Quincy P.O., 279; J. L. McFarlin, T. W. Hentz, and A. C. McCants files, Citizens Papers, M-346, rolls 628, 436, 615, NA; Petition of Citizens of Monticello, Florida, to Jefferson Davis, March 1863, Letters Received, Confederate Secretary of War, A. C. McCants file, 324-M-1863, record group 109-M-437, roll 402, NA; *OR*, ser. 1, **XXXV**, part 1, 346.

and “cultivating” the beds. Later, when the contents of the beds matured, hoppers were needed “for leaching the earth” and furnaces and kettles were used for “boiling down the lye.”⁶

There might be several series of beds under each shed. The first bed in each series was left empty. In the second bed were placed four layers, two consisting of vegetable matter and earthly materials together, and two consisting of solid animal matter, arranged in alternating order, and each moistened. After about a week the contents were transferred to bed number one and thoroughly intermixed by breaking “all clods or compact masses” and kept moistened. After the mass was returned and reduced, it was built back up to the proper level, usually two feet, with new materials. All the beds were thus treated, transferring the contents of three to two, four to three, and so on. It was recommended that all beds be turned “once a week in midsummer” and “twice a month in winter.”⁷

Niter beds were considered mature when “a white, moldy appearance” was “perceived on the surface.” In 1862 it was predicted that beds in the South would mature in a year. That prediction proved to be optimistic and only near the end of the war were most beds beginning to mature.⁸

Construction of the nitriary at Tallahassee began in late summer 1862. For a nominal rent of only a dollar a month they were established on the property of Philip T. Pearce, a native of South Carolina who was listed in the census as a “manufacturer.” Materials were supplied largely by local residents. In early August Robert Gamble sold 126 barrels of shells and two pots to Latrobe for lining and watering the beds. Lumber was provided by Dean and Monchet and probably others. Although it is not known how many sheds were built during the first phase of development, on January 10, 1863, Isaac W. Bowen was paid for twenty days’ work as boss carpenter on “the last shed erected,” which was “30’ x 80’.” Bowen also furnished “two asst. negro carpenters” and “one negro labourer” for work on this shed. The same day Bowen was paid for 725 feet of plank used for box moulds at the beds and for four days’ labor of

6. G.W.F. Price, *Artificial Production of Nitre: Containing Practical Directions Concerning the Formation and Cultivation of Nitre Beds...* (Montgomery, Ala., 1862), 5, 8, 9, 11, 13, 1415.

7. *Ibid.*, 15-17.

8. *Ibid.*, 18-19; *OR*, ser. 4, III, 695-96, 698.

himself and one black assistant carpenter for building the same. As time passed additional lumber was consumed in repairs and the construction of a new shed in 1863. By the end of September 1864, there were three niter sheds at Tallahassee, covering seventy-seven beds, and containing 30,000 cubic feet of saltpeter bearing materials.⁹

Lieutenant Colonel William K. Beard hired wagons and teams to the beds for various jobs, including hauling "lime for New Beds" in August and September 1863. The same year wagons were repaired by P. T. Pearce and Richard Saunders, the latter a former county sheriff.¹⁰

Even though most of the lime for the Tallahassee beds was "obtained free of expense," some had to be purchased. In June 1863, 468 bushels of "old lime" was bought from Colonel Beard, and in September 1864 James B. Gamble, a farmer, supplied 696 bushels of presumably first quality lime.¹¹

During the latter part of 1864, apparently in anticipation of the beds finally maturing, preparations were made to build furnaces. In August James Ellenwood sold 15,000 bricks for that purpose, and a month later the Pensacola and Georgia Railroad was paid for transporting "two car loads of brick . . . 25 miles" for the same use.¹²

By September 1862, Latrobe published a dual reward scale for carcasses delivered to the Tallahassee niter beds. For each dead cow, steer, or horse from outside the town he would pay five dollars, calves two dollars fifty cents, dogs twenty-five cents, and cats twelve and a half cents. From within the town the rates for larger carcasses dropped to three dollars. Calves brought a dollar fifty. The price for dogs and cats remained the same. Periodically, P. T. Pearce supplied either carcasses or offal. In September 1862 he was paid fifty cents a day for beef offal, and the following December he received twenty-five cents each for 231 more "beef offals." During January and March 1863 he contributed respectively thirty and nine cow

9. P. T. Pearce, Robert Gamble, Dean and Monchet, and I. W. Bowen files, Citizens Papers, M-346, rolls 783, 333, 235, 84, NA; 1860 Census, Fla., Leon, Tallahassee, 7; (1870), 44, 39.

10. W. K. Beard, P. T. Pearce, and Richard Saunders files, Citizens Papers, M-346, rolls 51, 783, 903, NA; 1860 Census, Fla., Leon, Tallahassee, 11.

11. W. K. Beard and James B. Gamble files, Citizens Papers, M-346, rolls 51, 333, NA; 1860 Census, Fla., Leon, Tallahassee, 14.

12. James Ellenwood and Pensacola and Georgia Railroad files, Citizens Papers, M-346, rolls 280, 789, NA.

carcasses for the published rate of three dollars each, and during the next two months he was paid a total of \$26.30 for "14 carcasses of cows, calves, hogs, dogs, & c."¹³

The regularly assigned laborers at the Tallahassee niter beds were all slaves, overseen presumably by a white superintendent. Their duties must at times have been quite nauseous, given the beds' content and handling procedures, already discussed. During the initial construction of the sheds the work force was larger, but the exact number cannot be determined because all of the bureau's Florida slaves were reported on a single roll. The October-December 1862 roll listed thirty-eight laborers, hired from sixteen owners, of whom at least twenty-two probably worked at the beds. The next quarter the total number dropped to twenty-two, hired from eight owners, of whom a minimum of thirteen likely toiled at the beds. After that the number was twelve through May 1864, eighteen, June 1864, and nineteen, July-September 1864, all hired from Cary B. Gamble, a Confederate surgeon, through his agent, Robert H. Gamble, who was a captain of artillery. Quarters were built for the slaves and they, according to contract, were to be clothed, shoed, and doctored by the Confederate government. In December 1862 the "entire force at [the] Nitre Beds were successively ill with pneumonia," and since there was no post surgeon, Tallahassee's postmaster, Miles Nash, who was also a physician, attended to them.¹⁴

Although Florida's caves were usually thought to be too wet, the Confederates apparently attempted to mine at least one. Neither a description nor a precise location has survived, but it was somewhere in the vicinity of Brooksville, Hernando County. The mining activity occurred during late 1862 and early 1863. Within that period Assistant Superintendent A. C. McCants was reimbursed for several items bought "For use at [the] cave," including a gallon measure, skimmer, wooden bowl and tray, buckets, and grindstone, plus several hauling jobs. Subvouchers all signed in Hernando County, indicate that in October 1862 Jacob Winecoff and Charles H. Phinny, Marion County planters, each hauled from

13. *Charleston Daily Courier*, September 25, 1862; P. T. Pearce file, Citizens Papers, M-346, roll 783, NA.

14. Confederate Slave Payrolls, Nitre and Mining District 12, October 1862-September 1864, NA; 1860 Census, Fla., Leon, Tallahassee, 13, 21; *OR*, ser 1, LIII, 336, 240; George H. Meginniss and Miles Nash files, Citizens Papers, M-346, rolls 676, 732, NA.

"Archer Sta. to Cave 80 miles" for seven days with a four mule team, and on November 11, George W. Black, also a Marion County planter, used a horse and cart for one day for "moving hands." In January Peter Strange hauled 525 pounds of tools and other necessities "from Gainesville to nitre works." From mid-November through mid-January, Gillis Powell, a Hernando County farmer, on several occasions hauled "wood for furnace," and supplied "200 ft Plank" to be made into "clapboards for hoppers" at the cave. In January and February he also provided syrup, potatoes, corn meal, pork, beef, and corn for "Feeding hands." During the same months G. W. Black was again hauling provisions, freight, and wood for the furnace. He was also reimbursed for a ferry toll across the Withlacoochee River. The result of the effort to mine the cave is unknown, but the absence of data after February 1863 may mean that the Confederates realized it was a failure and abandoned it.¹⁵

The Nitre Bureau's operations in Florida were the weakest for all of the Confederacy east of the Mississippi River. Official reports at the end of September 1864 clearly show an abysmally poor yield of saltpeter. By that time only 820 pounds had been delivered, although \$10,060 and \$6,158.92, respectively, had been spent on the Tallahassee niter beds and "Government works." But the records are possibly incomplete. In May 1863 A. C. McCants was reimbursed for drayage of "4 b'els & 1 Box nitre & 1 Box Lead 1163 lbs" from "Monticello to Station No. 17 S. A. & G rr," which may or may not be reflected in the 820 pound figure of 1864. There is also the chance that some of the niter beds were leached after the 1864 report. At the end of the war, when the Federals finally occupied Tallahassee, they reportedly found "2,000 pounds nitre" there. But whether it came from the beds can only be conjectured. Judging by the known yield of saltpeter, the Nitre Bureau exertions in Florida were largely a failure, which can be attributed to geography, the small force employed, and perhaps to time, assuming that most of the artificial beds had not matured by the conclusion of the war.¹⁶

15. A. C. McCants, George W. Black, and Gillis Powell files, *ibid.*, rolls 615, 68, 814, NA; 1860 Census, Fla., Marion, Ocala P.O., 51, 49, 36; (1870), Hernando, Brooksville P.O., 50.

16. OR, ser. 4, III, 698, 699; A. C. McCants file, Citizens Papers, M-346, roll 615, NA; Philadelphia *Evening Bulletin*, June 15, 1865.