My Weekend as a Topographical Engineer
by
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My Weekend as a Topographical Engineer

Early this summer, technically late spring, I was invited to Bent's Old Fort in Southeastern Colorado to participate in their Living History Encampment. This experience will be remembered and treasured as one of the highlights of my life. Let me start with a little background history.

chronometer, chain, sextant

What is Bent's Old Fort?

Bent's Fort was built in 1833 by William and Charles Bent (sons of Silas Bent, a postmaster, lawyer and judge who in 1806 was appointed surveyor-general of the Louisiana Territory headquartered in Saint Louis) and Ceran St.Vrain (born in Missouri to a French noble family who were dispossessed during the French Revolution), Bent's Fort was the largest of all trading posts in the mountain-plains region.

This massive adobe and timber structure was located on the Mountain Branch of Santa Fe Trail along the northern bank of the Arkansas River near present day La Junta, Colorado. This fort was an important point of commerce and brought traffic from the Trappers Trail between Santa Fe & Fort Laramie, Taos trade commerce between Santa Fe & Saint Louis and from several Indian tribes such as the Mountain Ute, Kiowa, Arapaho, Pawnee, and Cheyenne.

Not built for the purpose of being a military fort, the fort was very important to the military during the Mexican war and was used as a staging ground, hospital, and government supply depot between 1846 and 1847 by General Stephen W. Kearny's Army of the West.

Lieutenant James W. Abert of the Unites States Corps of Topographical Engineers visited the fort twice, once during an 1845 expedition and again in 1846. The visit in 1846 proved to be very important in the future for Bent's Fort. Abert had contracted a "fever" on the expedition and was left to rest and recover at the fort for a month. During his stay he measured and sketched the fort and painted many pictures, providing the most complete and accurate set of existing drawings of the structure.

The fort survived for 16 years between 1833 and 1849. However, the last few years, especially during and after the war, the fort and its builders had some tough days. In September 1846, Charles Bent was appointed, possibly illegally, the first American governor of New Mexico by General Kearny and was killed only four months later in the New Mexican uprising in Taos. William Bent and Ceran St.Vrain were never paid by the army for the supplies that were provided by and stored at the fort and the trade business with the Mexicans and Indians suffered during the period the army was using the fort. In 1847, they offered to sell the fort to the government for $15,000 and were rejected by the army.

In 1848, William and Ceran dissolved their partnership. William kept the fort while Ceran took control of the company's stores in Taos and Santa Fe. In the summer of 1849, William Bent loaded wagons and abandoned the fort. The fort was destroyed shortly thereafter. Speculation has it that William blew it up himself with gunpowder and explosive charges to render it useless to the army or other traders.

Fast forward to 1975 when the federal government began the authentic reconstruction of Bent's Old Fort on the ruins of the original site near La Junta, Colorado. The reconstructed fort was completed and dedicated in 1976, 127 years after being abandoned and destroyed.

Prior to reconstruction, architects charged with researching and rebuilding the fort had at their disposal diaries and descriptions written by travelers and employees of the original fort, but some of the most important and useful documents came from the diaries, measurements, sketches and paintings of Lieutenant James W. Abert that he made in 1846 while recovering from illness.

Lieutenant Rittel & Mr. Holt mapping Bent's Fort using plane table.

Today, Bent's Old Fort is a National Historic Site operated by the National Park Service where interpreters in period clothing perform daily tours and occasional living history demonstrations. One of those demonstrations is combined with their annual "Living History Encampment," a training program for living history interpreters, volunteers, and those wanting to learn more about the time or Bent's Fort. Participants dress in period clothing and perform the work and duties that would have been expected of them at the fort in the 1840's. Some work as company traders, some choose to be hunters or trappers, others learn blacksmithing or carpentry. Women may choose to be domestics, cooks or Mexican laborers. And some, like me, get to be part of an elite group known as the U. S. Corps of Topographical Engineers. *Continued on page 5*

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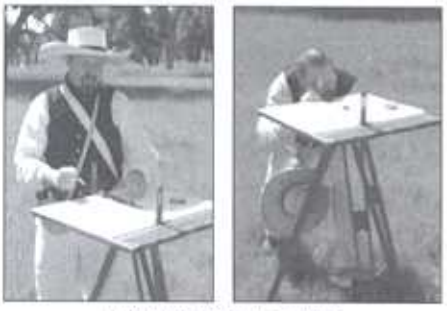
Who were the Topographical Engineers?

The Topographical Engineers came into being during the War of 1812 and in 1813 were authorized by Congress. The early duties of the topographical engineers were to conduct engineering surveys for the military and explore routes for the passage of troops. Not authorized in 1815, they were revived in 1816 and made responsible to the Chief of Engineers. In 1838, they separated from the Engineer Department and the Corps of Topographical Engineers came into being. The Corps of Topographical Engineers took over all civil engineering projects while the Corps of Engineers took over all military functions.



Lieutenant Rittel mapping Bent's Fort using plane table.

In the 1830's the Topographical Engineers were involved with many surveys of rivers, roads, canals, and railroads across the country. They constructed lighthouses on the coasts and many were sent to Florida to aid the Army against the Seminole Indians.

As the country expanded to the West, the Topographical Engineers again found themselves as explorers and mappers, expeditions were made along routes such as the Oregon and Santa Fe Trails and many of the rivers crossing the western territories. Notes and reports were sent back to Washington containing various observations such as those of latitude/longitude and barometric pressure. Also included in the reports were sketches and descriptions of plants, wildlife, Indians and others they encountered.

Various national and state boundaries were run by the Topographical Engineers. Of local interest, Lieutenant John G. Parke assisted in determining the Iowa and Minnesota Territory line.

During the Civil War, most Topographical Engineers were attached to the various armies for topographical duties. Some, such as George Meade, John Parke and John Fremont, became prominent generals themselves. It was during the Civil War in 1863 when the Corps of Topographical Engineers was abolished as a distinct branch of the Army and merged back into the Corps of Engineers.

My Living History Experience

From June 7 through 10, 2007, I became a Lieutenant in the U. S. Corps of Topographical Engineers on expedition along the Santa Fe Trail in the 1840's.

Although we started our living history encampment in a classroom at Otero Junior College in La Junta, by the end of day one, we were completely immersed in the life we were there to recreate. In the classroom, we learned some of the basics of Bent's Fort and the "rules" of living history interpretation from a knowledgeable group of individuals who make living history interpretation their occupation. When class was finished, we drove to Bent's Old Fort, put our belongings of the present time in the trunks of our cars and entered the 1840's.

Sextant Practice

Thursday, June 7, 1846. Arrived at Bent's Fort on the Arkansas River. The weather was cool and windy. Our expedition is being led by Captain Don Erickson. Our camp is situated about a quarter-mile East of the fort near the bank of the river in a grove of cottonwood trees. We met an employee of the fort who offered to lend us some buffalo robes to help us keep warm as the temperature was expected to drop into the 30's overnight with wind speeds near tropical storm strength. This was very much appreciated.

Dinnertime

Friday, June 8. Awoke to find no major damage from the overnight winds. We were invited to the fort for breakfast at the head table with Mr. Luzader, the head trader. Breakfast of liver, ham, eggs and tortillas was served by the Mexican women working at the fort. After breakfast we acquired a box of vermicelli from the trader and headed back to camp.

At camp, we set up a Green's pattern Fortin-type barometer and learned how to adjust it and take readings of the barometric pressure. This and measuring the temperature will be done twice daily and recorded in our books.

Captain Kevin Reddy began instruction in the use of the sextant. We learned how to adjust the sextant for use and practiced measuring angles to distant objects. It had become too late in the day to make any meaningful solar observations with the sextant, so we just went over the calculations to determine latitude and longitude and will try again tomorrow.

Our cook prepared the vermicelli we purchased at the fort with a red-chili sauce and tamales for our noon meal. The temperature and humidity was very mild today, much warmer than yesterday, and little wind.

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In the afternoon Lieutenant Bob Elsloo instructed us in the finer points of topographical drawing and watercolor painting. We painted a view of the fort from our camp. The rest of the day was spent making sketches and taking notes. Noticed several trappers setting their traps along the river. A wagon passed by en route to the fort earlier today. For supper, the cook had prepared us an excellent buffalo roast. At nightfall we had a clear sky and were able to observe the Galilean Moons of Jupiter through the telescope.

Saturday, June 9. We were again invited to the fort to have breakfast with Mr. Luzader. It appears a band of Indians attempted to steal some horses overnight and a member of the trading company was killed.

The fort is busy with activity. Many visitors today. Plenty of noise from the blacksmith shop and the trappers had caught a beaver and were removing its pelt in the plaza of the fort. "Knife Chief" a Lakota Indian and his wife were camped in a tipi outside the fort's northern gate.

We spent the majority of today mapping the fort and vicinity by use of the plane table and alidade. Again it being too late to make actual use of the sun, we assumed it to be local noon and took readings with the sextant to practice our latitude/longitude calculations. After lunch of chicken and dumplings prepared by our cook, we became acquainted with several additional period instruments and books and were instructed in the uniform of the Topographical Engineer. We also took some time to measure and sketch the interior of the fort.

We were invited to supper and a play presented by the employees of Bent's Fort this night. After supper we retired to camp and sung "Benny Havens, Oh!" and a few other songs around a campfire.

Sunday June 10. We took final pressure and temperature readings this morning and again had breakfast at the fort. After breakfast we met with the other participants of the weekend (those doing work in the fort as trappers, traders, blacksmiths, domestics, etc.) and our hosts to discuss our experience. We then were allowed to return to present day life and head home.

I would like to thank Greg Holt and the volunteers of Bent's Old Fort for this wonderful opportunity. I would also like to thank Don Erickson, Kevin Reddy, and Bob Elsloo for their excellent instruction in the life and duties of a Topographical Engineer. I would encourage anyone interested in wanting to do living history interpretation, particularly about 1840's life, to consider the opportunity that exists at Bent's Old Fort each June.

Colorado Sunset at Bent's Fort

For more information about the U. S. Corps of Topographical Engineers visit the following website: http://www.topogs.org

For more information about Bent's Old Fort visit the following website: http://www.nps.gov/beol/

Photos courtesy of Don Erickson and Barbara Ingles ≺