Technology Comes to the Wild West: The Telegraph

I. Interpreting Primary Sources

Primary sources are documents created in a particular time that give information about the time. A primary source provides firsthand information about people and events. Students of history use primary sources to learn about the past. Letters, journals, photographs, eyewitness accounts, and certain government documents are primary sources.

A *secondary source* is a scholarly study of primary sources. The author gets the information through research or interviews. Most history books are secondary sources. Learning to distinguish between primary and secondary sources is a valuable skill that you will use as an adult to make decisions and to judge the validity of information. You use a primary source when you read a woman's diary written on her 1868 trip along the Oregon Trail. You use a secondary source when you read an article in an encyclopedia.

To distinguish a primary source from a secondary source, keep these guidelines in mind:

* ***Identify the author*** of the account. Was the author an eyewitness to the event? If so this may be a primary source. If she is writing about past events, it is a secondary source.

* ***Recognize when and where*** the account was written. Was it written during the period that it describes, or afterwards?

* ***Look for key words.*** Words such as *I*, *we*, or *us* are used in eyewitness accounts.

* ***Look for footnotes*** **and bibliographies**—usually included in secondary sources.

Answer these questions based on the Post Returns from Fort Davis in the late 1870s that are found on the next pages:

1. Are these Post Returns primary or secondary sources?

2. Who was 2nd Lieutenant George Andrews and where had he been?

3. What was the name of his regiment and company? What were the soldiers working on?

4. What was the new technology being installed called and what did it do? In what ways might it have changed life for army posts across Texas? Why?
The telegraph line was being constructed from Fort Davis to _____?

5. Abbreviations in old records are often different from current ones. This makes interpreting the text difficult. What do you think these abbreviations stood for?
Comdg
Hdqrs or HQ
Infy
Lieut or LT
Capt

6. What do you think "detached service" meant?

7. Who was the first officer in the Post Returns listed as commanding the construction of the Military Telegraph?

8. Would you have liked to be commanding a company of soldiers installing telegraph lines and poles? Why or why not? Give your reasons.

9. How do you think the army communicated before the telegraph line was installed?

10. What do you think the Fort Davis soldiers of 1878 would think about today's DSL and high speed Internet? Explain.

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II. Using Primary Sources

The U. S. Army played a major role in bringing the inventions and innovations of the late 19th century to the wild areas of west Texas.

Read the following excerpts from the Fort Davis Post Returns. They have been re-typed word for word from the originals to make reading them easier. Post Returns were monthly records the army kept of the men stationed at the post and the events that happened there. They are considered primary sources since they were written by the officers at the fort. Researchers can piece together what took place at the post by looking at the Post Returns. Examining documents from over one hundred years ago can be difficult because of handwriting and unfamiliar abbreviations (eg "S.O." stands for Special Order).

What are these Post Returns talking about?

Post Return of Fort Davis, Texas October , 1877
Record of Events

Company A 25th Infantry:
Since Oct. 23, 1877 the company has been engaged in constructing a telegraph line from Barilla Springs, Tex to Fort Davis Tex.

Commissioned Officers, Present and Absent, accounted for by Name.
Absent
on Detached Service
John W. French Capt 25 Inf "A"
Building U.S. Mil. Telegraph line since Oct 24. '77
Letter of Sept. 14 '77 Hdqtrs D.T.

Post Return of Fort Davis, Texas November, 1877
Record of Events

Company A 25th Infantry
The Company returned to this post Nov. 23. 1877 from Det. Ser. Constructing U.S. Mil. Telegraph Line from Barillas Station to this post.

Commissioned Officers, Present and Absent, accounted for by Name."
Present:
John W French Capt 25 Inf "A" Commanding Co. Was on Det. Ser. Building U.S. Mil Telegraph Line per letter of Sep 14. '77.

Post Return of Fort Davis, Texas October, 1878
Record of Events

Company A 25th Infantry:
This company was detailed for duty in constructing U.S. Military Telegraph line from Fort Davis, Texas, towards El Paso, Texas, S.O No. 13 Hdqrs, Dist. Of Pecos, Sept. 18. 1878. Was relieved from duty at post Sept. 25. '78 Orders 146 Fort Davis, Texas Sept. 25th '78, and has been in the field since Oct. 5th 1878."

Commissioned Officers, Present and Absent, accounted for by Name.
Absent
on detached service
George Andrews 2nd Lieut 25th Infy "I"
At El Muerto, Texas, Comdg Co. Since Oct. 5 '78. Orders 146 Ft. Davis, Texas. Sept. 25. '78.

Post Return of Fort Davis, Texas Nov, 1878
Record of Events

Company I 25th Infantry:
This company has been constructing U.S. Military Telegraph Line since Oct. 5, 1878, from Fort Davis, Texas, towards El Paso, Texas, per S.O. 13 Hdqrs. Dist. Of the Pecos. Sept. 18, 1878.

Commissioned Officers, Present and Absent, accounted for by Name.
Absent
on detached service
George Andrews 2nd Lieut 25th Infy "I"
Comdg Co. since May 23, 78. on D.S. Comdg Co. constructing U.S. mil. Telegraph line since Oct. 5 '78 from Fort Davis, toward El Paso, Texas, S.O. 13. Hdqrs Dist. of the Pecos. Sept. 18 '78.

Post Return of Fort Davis, Texas December, 1878
Record of Events

Company I 25th Infantry:
This company was detailed for duty in constructing U.S. Military Telegraph line from Fort Davis, Texas, towards El Paso, Texas, S.O No. 13 Hdqrs, Dist. of Pecos, Sept. 18. 1878, and has been in the field since Oct. 5th 1878.

Returned to Fort Davis, Texas, Dec. 20, 1878 for want of material to continue work.

Commissioned Officers, Present and Absent, accounted for Name.
Present
on detached service
George Andrews 2nd Lieut 25th Infy "I"

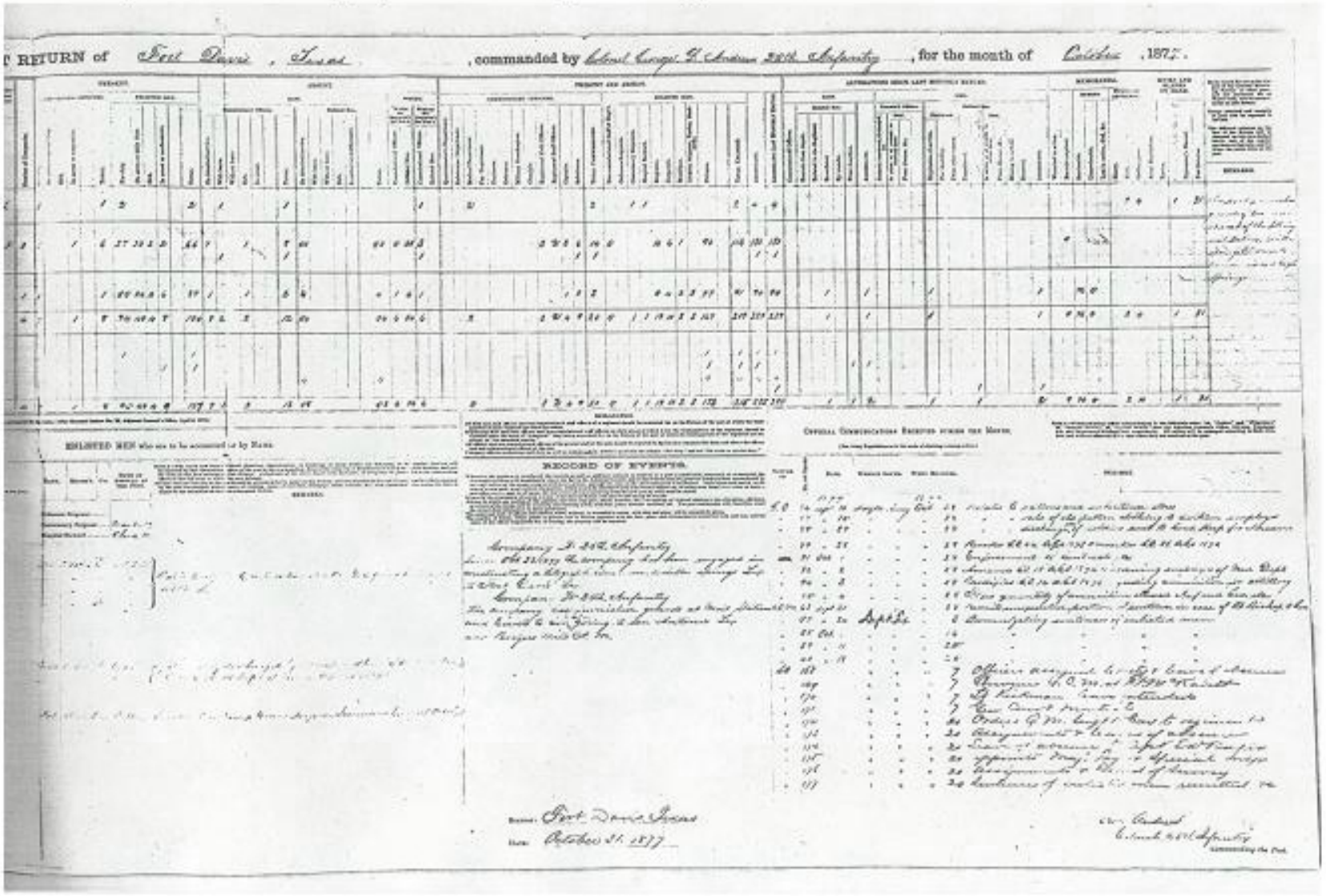
Comdg. Co. since May 23. ‘78. Joined from D.S. constructing U.S. Mil. Telegraph Line, Decr. 21, 1878.

1. What are these Post Returns talking about? Explain

2. View the copy of the Post Returns below. The form was historically printed on 11”x17” paper, filled out by army officers, and sent to Washington, D.C. where it has been stored in the National Archives since the 1880s. Ink fades over the years and paper becomes yellowed. In modern times, paper records such as these have been copied onto microfilm to save wear on the fragile paper. As you can see, working with these types of documents presents special problems. List a couple of difficulties you think you would encounter if researching primary documents such as these.

Post Returns

The government required that information about the post and its activity be maintained. Post returns were entered by hand on a large pre-printed sheet and sent to Washington by mail. It recorded who was at the post and various monthly activities. These returns have provided historians a glimpse into the running of a military post.



Technology Comes to the Wild West—The Telegraph: Wired Wild West
III. Comparing and Using Primary & Secondary Sources

Read the following excerpt from an article entitled " 'Wired Wild West': The U.S. Army and the Telegraph in the Trans-Pecos Region of Texas, 1870-1891" by James D. Lewallen. The complete article was published in 2003 in *The Journal of Big Bend Studies,* Volume 15, pages 101-114. It is a secondary source. Lewallen spent much time researching both primary sources and secondary sources, many of them found in the library at Fort Davis National Historic Site.

"In the modern communications age of the Internet, satellite television, ubiquitous mobile telephones, and 'Up-to-the-Minute News,' it is difficult to even imagine, let alone understand, a time when items of information that were days or even weeks old were considered to be 'news.' Yet, up until the middle of the 19th century, this was the case.

But in 1844, a wondrous new invention—the telegraph—quickly changed all that, transforming and revolutionizing the world, and beginning the "modern" communications age. This amazing new device allowed for the nearly instantaneous transfer of information and linked the world together as never before.

The technology was not available everywhere, though, and was slow to diffuse into some areas, especially the frontier southwest. The telegraph, which had quickly become such an integral part of mid-19th-century life, only came to the Trans-Pecos region of Texas through the efforts of the U.S. Army and its troops—helping to tame and populate this formerly frontier region, and pushing the boundary of the frontier further west.

By the summer of 1877, troops from Ft. Stockton had erected poles and strung telegraph wire westward to Barilla Springs, a small sub-post and mail station approximately halfway between Stockton and Fort Davis.[20] On September 14, 1877, Headquarters, Department of Texas sent orders that the line be continued westward.

Operating under those orders, men from Company A, 25th Infantry, under the command of Captain John W. French, departed from Fort Davis on October 23, 1877 to erect poles and connect the telegraph line from Barilla Springs to Fort Davis.[21] By November 12, 1877, fourteen miles of line had been constructed, with the remaining eleven miles completed and the company back at Fort Davis by November 23, 1877.[22] Fort Davis was finally connected to the outside world.

Work to continue the telegraph west was undertaken the following year. Under orders dated September 25, 1878, 2nd Lieutenant George Andrews (the son of the post commander, Colonel George L. Andrews) led a party of 7 to 10 men to begin construction on the telegraph lines towards Fort Bliss in El Paso.[23] The men worked from Fort Davis until October 5, when they had completed too much of the line to travel daily. Taking to the field with 28 men from companies I, E, & F of the 25th Infantry, Andrews was accompanied by Corporal J.M. Kistler, U.S. Signal Corps, acting as 'constructor and field operator.'[24]

Andrews took with him as transportation 'two 6-running gear of an army wagon … a [6-mule] water wagon … and two 2-mule wagons belonging to the Signal mule teams, the Service.' [25] Following the route of the old San Antonio to El Paso mail road, Andrews' men proceeded to build the line from Fort Davis to Fort Quitman on the Mexican Border, then along the Rio Grande toward El Paso. At the same time, troops from El Paso were building in the opposite direction along the same route. Andrews would oversee the construction of 91 ½ miles of telegraph wire before meeting with the wire from El Paso. The two were connected together on February 1, 1879, though it was not put in working order until Feb. 5, due to a broken line '20 miles back.' [26] This final link completed a network which connected San Diego, California through Ft. Davis to Ft. Concho and San Antonio and finally down to Brownsville. [27] "

[21] Post returns of Fort Davis, Texas, October 1877

In this example of a secondary source, you will notice the superscript [footnote] numbers, which give reference to the sources where the writer found this information. (Only one footnote is given, but the published article contains many footnotes.) Quotation marks were used for quoting the exact works from the source. Also, the …. indicates that not all the quote was given.

Evaluating Secondary Sources

1. What two things indicate that some of this information was taken from primary sources? (The author of this article undoubtedly looked at primary sources such as the Post Returns to write this article.)

2. You have read the Post Returns about this event in Fort Davis history. Did the secondary source help you better understand the Post Returns? How?

3. The telegraph was the beginning of a technology that fostered communication throughout the nation. What other communication technology do you think has been developed because of the invention and use of the telegraph? Explain.

4. Read the next three pages. They contain a report from Lieutenant George Andrews on the details of constructing the telegraph line. Choose one of these as your final project
    a. Compare and contrast the primary and secondary sources in a paragraph.
    b. Construct a Venn Diagram to show the likenesses and differences between the two passages.
    c. Create a PowerPoint presentation to tell about the coming of the telegraph to west Texas. Include pictures or your own drawings.
    d. Create a comic strip that details the story of the establishment of the telegraph on the frontier.
    e. Below is a picture of a telegraph key. Do a bit of research. Then write an essay on how the telegraph worked and how the messages were relayed. Be sure to list your sources.

This letter from Second Lieutenant George Andrews has been transcribed from the original to make it easier to read. It is a report of the telegraph work his command has completed. Would this be a primary or secondary source?

This sketch of telegraph construction appears in the Fort Davis Museum/ Visitor Center. Is this drawing a primary or secondary source? Explain.

Station of Co. "I" 25th Infantry
Fort Davis, Texas
Feb. 20, 1879

Sir: In compliance with telegraphic instructions dated HQ, District of the Pecos, Fort Concho, Texas, February 11, 1879, I have the honor to submit the following report of work done by myself and command in the construction of the extension of the U.S. Military Telegraph line from Fort Davis towards El Paso, Texas.

Having reported by telegraph to the Actg. Signal Corps officer in charge at Denison, in compliance with S.O. No. 13, dated HQ District of the Pecos, Sept. 18, 1878, I received instructions Sept. 24 to indicate to Corpl. J. M. Kistler, Signal Corps, who had reported to me as constructor and field operator, the general direction of the line for a few miles from this post; the work was commenced Sept. 25, the working parties returning to the post at night until Oct. 5 when the company took to the field.

The command at this time consisted of Corpl Kistler, 28 enlisted men of Co. I, 2 of Co. F, and one of Co. E, 25th Inf. The transportation consisted of two 6-mule teams, the running gear of an army wagon, and a water wagon, drawn by six mules furnished by the Quartermaster Department, and two, two-mule wagons belonging to the Signal Service. Corporal Kistler and myself were mounted.

In order to give a full report of the character of service performed, I will give a statement of the manner in which the work

was carried on. Corporal Kistler staked out the line; for this he was furnished a 2-mule wagon to carry the stakes; a rope 70 1/3 yards in length and five men including the driver. About 10 miles a day could be staked out.

The poles were distributed 25 to a pile, one pile to each mile, by the contractor, but as he frequently threw off the poles at night when he could not see the mile stake, they were often unloaded at shorter intervals. The running gear referred to above was used for distributing the poles at the holes; three or four men were required for this purpose.

The men detailed for the digging of holes were sent out in sets of two's, one having a digging bar, the other a spoon shovel. A sergeant measured each hole before the party moved on. The poles were delivered so slowly that there was always more holes dug than we had poles for, and it was frequently necessary to go back 20 or 30 miles to set up a few miles of poles. It was not safe to leave the poles on the ground for any length of time as they were liable to be burned by passing trains or by prairie fires. The earth in the valleys or flats is usually soft and easily dug, but over in the hills and through canyons, it was generally rocky and difficult to dig holes.

Installing the line
(not at Fort Davis)

The holes being dug and the posts placed in them, we were then ready to build. Corpl. Kistler, assisted by one or two men, ran out the wire and made and soldered the joints. A party of two men went out with the wagon to nail on insulators and lightning rods — the latter were placed every fifth pole — and to distribute insulators. The pole parties followed. Each consisted of four men: one to sight the pole to see it was vertical, one to steady it in position, one to shovel in earth, and one to tamp the earth. The party putting up the wire consisted of two or three men to climb, and an equal number to pull the wire.

A great portion of the poles I numbered myself and a record of each day's work has been carefully kept in a book furnished me for the purpose. I also took the compass bearing of every fifth pole between this post and Quitman, recording the same in the book. I frequently sighted the poles and distributed the insulators myself when I was short of men. This work was also performed by Corpl. Kistler when he was not required for other work.

The foregoing refers particularly to the work done on that part of the line built with wooden poles, and required only a few modifications to apply to the part built with iron poles.

The iron poles weigh but 75 pounds each and are therefore easier to handle, and more of them can be loaded on a wagon. I gave special attention to the building of this part of the line, because I knew that if well built it would stand for many years . . . .

Altogether I consider the iron pole greatly superior to the wooden

one, and I think time will prove that they are best fitted for long lines running through uninhabited regions. The soil, though light on top, becomes very hard when rammed and the iron poles set into the ground four feet are more stable than the wooden ones set in 3-1/2 feet.

The length of time taken to complete the work may make some explanation necessary, and I will here state if the material had been furnished me as I was ready for it the line would have been completed by December 1, 1878.

The men went to work at 7 A.M. but no work was done on Sunday except when it was necessary on account of the distance from water. The last lot of wooden poles was not all delivered until November 28. ....

Five gallons of paint reached me by stage Jan. 24. I went immediately to work and at 12:15 P.M. Feb. 1 I joined with the wire from El Paso, having built 91-1/2 miles of line. As the wire was broken 20 miles back, communication was not established until Feb. 5.

I went through to Quitman with a detachment and took the bearing of the poles while Corpl. Kistler numbered them. This part of the line, 25-1/2 miles, was built of pine poles by troops from the Dept. of New Mexico, although included in this Telegraphic Division. The work was completed Feb. 10, 1879, and my command returned to the Post Feb. 14. The distance traveled by the command and detachments was at least 1000 miles.

Very Respectfully, Your Obedient Servant
Geo. Andrews, 2nd Lt. 25th Inf.