



Words by iron wire: construction of the military telegraph in Arizona Territory, 1873-1877

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WORDS BY IRON WIRE: CONSTRUCTION OF THE MILITARY
TELEGRAPH IN ARIZONA TERRITORY, 1873-1877

by

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A Thesis Submitted to the Faculty of the
DEPARTMENT OF HISTORY
In Partial Fulfillment of the Requirements
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PREFACE

The subject of the military telegraph in Arizona Territory was first presented in 1963 by Dr. Arthur Woodward at the Fourth Annual Arizona Historical Convention. This study is a more comprehensive discussion of the period devoted to planning and construction.

The majority of materials utilized were primary sources, government documents and newspapers in particular. Secondary sources, such as general histories, monographs and articles, provided insight into the personalities of individuals involved in the building of the telegraph.

I am indebted to many for this project; Andrew Wallace for first suggesting the topic, and his continued assistance; Dr. Woodward for his initial help; and to the staff of the Arizona Pioneers' Historical Society for their patience. Also deserving mention are Dr. Benjamin Sacks, Douglas Martin, and Bert Fireman for their genuine assistance. Special mention is due Professor John A. Carroll, my mentor, for his scholarly guidance, and for his fortitude in tuning and amplifying a "weak signal". I must also thank Nancy for her endurance of additional duties, accepted uncomplainingly by an Army wife.

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ABSTRACT OF THESIS

In 1871 Arizona Territory was still on the fringe of a young nation, not only geographically but politically and economically as well. The white population was small and besieged by an ancient enemy--the Apaches. Numerous proposals had been made to solve the Indian problem--all had failed. The time had come for vigorous military action under an able commander. That man was George Crook.

Through his image, proposals which had been discarded in previous years were revived and put into concrete action. One program was the telegraph. In an unusual union of military and civilian enterprise, a government-owned telegraph was constructed that would eventually stretch from the Pacific shore to the Gulf coast. It was, indeed, an example of Nineteenth Century Army "civic action". The Apache was the precursor of the "iron wire". Its true value, however, was not as watchdog but rather as an evolutionary step from an isolated colonial region to a modern community.

CHAPTER I

THE DARK DAYS

The fifteen years immediately following the close of the Civil War have been aptly described as the "Dark Ages" of the United States Army.¹ These were indeed the years of retrenchment, reductions-in-force, and Congressional parsimony--and the crucial years of the Indian wars of the West. In Arizona, however, the analogy applies best to the military situation that existed in the ten years following the outbreak of the Civil War. The so-called "Bascom Affair" of January, 1861, triggered a loaded cannon of hate and misunderstanding into a series of wars between Indians and white men which would persist, with few peaceful breaks, until the capitulation of the last Apache bands in 1886.² It was the first decade of these wars, 1861-1871, that proved most difficult for the Army because of surpassing problems of organization and

1. The term was applied by Ganoë in referring to the austere years of the Army between 1865 and 1880. William Addleman Ganoë, The History of the United States Army (New York: Appleton-Century Co., 1942), p. 298.

2. The incident is well covered in Robert M. Utley, "The Bascom Affair: A Reconstruction," Arizona and the West, III, No. 1 (Spring, 1961), 59-68; and further discussed in Benjamin Sacks (ed.), "New Evidence on the Bascom Affair," Arizona and the West, IV, No. 3 (Autumn, 1962), 261-78.

communication. Arizona was still, as the Spaniards had called it, el fin del mundo--the end of the world--and the complex work of the Army was made infinitely more arduous because of this harsh geographical fact.

In the spring of 1861, with the recall of the few Federal garrisons in Arizona for service on Eastern battlefields, the Apaches were free to raid and plunder at will. Their depredations continued unabated through the brief period of Confederate occupation, and the coming of General Carleton's³ column of Union volunteers from California did little to deter the Indians. It was simply a matter of military inadequacy--troops could not be spared in sufficient numbers to cope with the problem. Nor did the victory of the Union in 1865 bring a proportionate improvement to the military situation in Arizona. The subsequent

3. James Henry Carleton, born in Maine in 1814, was commissioned a second lieutenant in the 1st Dragoons in October of 1839. On the eve of the Civil War, Carleton was promoted to major in the Regular Army and Colonel of the 1st California Volunteers. It was as commander and a brigadier general of the volunteers that Carleton assumed control of Arizona and New Mexico for the Union in 1862. Carleton received numerous brevets for gallantry and meritorious service in the Mexican and Civil Wars. He died in January, 1873. Thomas H. S. Hamersly, Complete Army Register of the United States for One Hundred Years, 1779-1879 (Washington, 1881), p. 334; Francis B. Heitmen, Historical Register and Dictionary of the United States Army, 1789-1903, 2 vols. (Washington, 1903), 1, 282.

activities of troops under Generals Mason⁴ and Ord⁵ failed to satisfy the vociferous demands of the residents of the new Territory for protection and succor. Elevation of the Territory to the status of a full-fledged military department under General Stoneman⁶ in 1870 was encouraging; but

4. Born in Ohio in 1824, John Sanford Mason entered West Point in July of 1843. He was commissioned as a second lieutenant in the 3rd Artillery in 1847 and promoted to first lieutenant in 1850. After serving as Regimental Quartermaster from 1854 to 1858, Mason was promoted to captain in 1861 and a few months later promoted to Colonel of the 4th Ohio Volunteers. He was breveted for his actions at Antietam and Fredricksburg and finally received a brevet brigadier general rank at the close of the Civil War. He returned to regular service as a major, promoted to lieutenant colonel in 1873, and retired as a colonel in 1888. He died in 1897. Hamersly, p. 607; Heitmen, I, 695; West Point Alumni Foundation, Inc., Register of Graduates and Former Cadets of the United States Military Academy (West Point, 1964), p. 234.

5. At the age of sixteen, Edward Otho Cresap Ord was appointed a cadet to West Point. Four years later, in 1839, he was commissioned a second lieutenant in the 3rd Artillery and served against the Seminoles in Florida. Ord did not participate in the war against Mexico but later served in the Northwest before returning to the East in 1861. His service during the Civil War brought him numerous promotions. After the Civil War, Ord again returned to the West. He retired from the service in 1881 and two years later died of yellow fever in Havana. Hamersly, p. 672; Heitman, I, 759; Register, p. 225; Allan Johnson and Dumas Malone (ed.), Dictionary of American Biography (New York: Scribner's Sons, 1934), XIV, 48; this source is cited hereafter as D. A. B.

6. George Stoneman, born a native of New York in 1822, entered West Point in 1842 and graduated in 1846 as a brevet second lieutenant in the 1st Dragoons. During the Mexican War he was detailed as quartermaster to the Mormon Battalion and by 1855 rose to the rank of captain in the 2nd Cavalry. At the outbreak of the Civil War, Stoneman was in command of Fort Brown, Texas, and was forced to escape with part of his command when General Twiggs sided with the Confederacy. He later joined the Army of the Potomac as brigadier general of volunteers and chief of General McClellan's cavalry. In 1864, he received command of the cavalry corps of the Army of Ohio and participated in the Atlanta

Stoneman's conscientious implementation of the official "Peace Policy" of President Grant finally infuriated the citizenry.⁷ Confusion and irrationality reigned in the spring of 1871, and the "massacre" of a band of Arivaipa Indians at Camp Grant by an irregular posse from Tucson added a particularly gruesome statistic to the military history of Arizona.⁸ The Camp Grant affair spelled the end of Stoneman's regime and marked the close of ten years of fruitless efforts on the part of the Army to pacify the isolated Arizona frontier.

campaign. Although captured, Stoneman was exchanged and rejoined Sherman in his final operations in the Carolinas. The regular army was brought back to normal rank structure and so Stoneman, as a colonel of the 21st Infantry, was sent to join his regiment in Arizona in 1869. That command was his final service to the Army, and an unfortunate one personally for he was strongly criticized by the Citizens of the Territory. Stoneman was retired for disability in August of 1871. Although established at his great estate, Los Robles near Los Angeles, Stoneman returned to public life in 1879 as a railway commissioner and gained a large popular following for his opposition to the power of the Pacific railways which helped him to be elected governor of California in 1883. He died in his native state of New York in September of 1894. Hamersly, p. 788; Heitman, I, 930; Register, p. 233; D. A. B., XVIII, 92.

7. President Grant initiated in 1869 a change in the Indian Policy. The new program was promulgated by the Indian Appropriations Act of 1871. Indian tribes were no longer treated as nations; each individual was considered a ward of the federal government. To accomplish this change, new agreements were required and reservations were assigned. A Board of Indian Commissioners was established to advise the president on matters relative to the "Peace Policy". See Helen Hunt Jackson, A Century of Dishonor (Boston: Robert Bros., 1885); Ralph H. Ogle, Federal Control of the Western Apaches, 1848-86 (Albuquerque: University of New Mexico Press, 1940).

8. The massacre is treated in James R. Hastings, "The Tragedy at Camp Grant," Arizona and the West, I, No. 2, (Summer, 1959), 146-160.

It was to this remote and beleaguered frontier that Lieutenant Colonel George Crook⁹ of the 23rd Infantry came as commander of the Department of Arizona in June of 1871.¹⁰ Crook, who had already earned

9. Appointed from the state of Ohio, where he was born in 1829, George Crook entered West Point in 1848 and four years later was commissioned a second lieutenant in the 4th Infantry. He served with his regiment in the Northwest until the Civil War whereupon he was given command of the 36th Ohio Volunteers. Within a year, Crook was breveted to major and appointed brigadier general of volunteers. His participation in the battles of South Mountain and Antietam earned him a brevet to lieutenant colonel. In 1863 Crook commanded a cavalry division in the Army of the Cumberland and was engaged in the Chickamauga campaign and afterwards successfully fought General Wheeler's cavalry corps at Farmington for which he received a brevet to colonel. After serving in West Virginia, Crook joined General Sheridan as one of his cavalry commanders in the final campaigns against Lee. He returned to the regular ranks as lieutenant colonel of the 23rd Infantry in 1866 and after a two year tour in Idaho, took command of the Department of Columbia. Crook spent four years in Arizona before taking command of the Department of the Platt, but returned to Arizona in 1882. His second tour in the Territory was marred by contradictions in Indian policies and Crook requested a transfer out of the Department of Arizona. Crook's last command was as the head of the Division of the Missouri with headquarters at Chicago; there he died in 1890. Hamersly, p. 383; Heitman, I, 340; Register, p. 240; D. A. B., IV, 563-564; see also Martin F. Schmitt (ed.), General George Crook: His Autobiography (Norman: University of Oklahoma Press, 1960); Frank C. Lockwood, Arizona Characters (Los Angeles: Times Mirror Press, 1928), pp. 82-110; John Gregory Bourke, On the Border With Crook (New York: Scribner, 1891).

10. The assumption of command was promulgated by Special Order No. 176, War Department, Adjutant General's Office, 1871 and General Order No. 12, Department of Arizona, June 4, 1871. See U. S., Army, Department of Arizona, General Orders and Circulars, 1870-1886, Records of the Adjutant General's Office, Record Group No. 94, National Archives. These records are on microfilm at the Arizona Pioneers' Historical Society. This source is cited hereafter as DARiz: GO & Cir.

a reputation as an Indian fighter elsewhere in the West, was greeted with anxious expectation.¹¹ He immediately began a program of fact-gathering to determine the exact status of his command. Certain improvements, but not many, had been made since the end of the Civil War. The arrival of the California Column¹² in 1862 had helped to turn the eyes of Arizona toward the Pacific state, and in 1865 the Military District of Arizona was transferred from the Department of New Mexico to the Department of California.¹³ This change in administrative channels proved unsatisfactory, however, for the headquarters of the Department of California was in San Francisco, twice as far from Tucson as Santa Fe. Moreover, the impersonal nature of military procedure and correspondence often reduced command prerogative in the District of Arizona. The report of Major

11. Crook had twice served in the Northwest and had distinguished himself during the Rogue River War and later against the Paiutes in Idaho. See Schmitt, Chap. 11.

12. The term California Column was the popular reference for the California Volunteers commanded by Carleton. See Union Army Operations in the Southwest (Albuquerque: Horn & Wallace, 1961).

13. Arizona was designated a part of the Department of California and Division of the Pacific by General Order No. 118, 1865, and General Order No. 59, 1866, Adjutant General's Office. See Major General Irvin McDowell, Outline Description of Military Posts in the Military Division of the Pacific (San Francisco: 1879), p. 3.

Roger Jones,¹⁴ Assistant Inspector General of the Division of the Pacific, had summarized the problems facing the district commander in 1867.¹⁵

The remoteness of the Territory from its immediate headquarters was exemplified in the mail service. Actions, based on correspondence between the department headquarters and posts in Arizona, often required three months and more to complete.¹⁶ St. Louis was considered to be as near in time, if not closer; papers and letters from that city reached Tucson in eighteen to twenty-one days.¹⁷

Another problem resulting from the distance between headquarters and the subordinate command was timely courts martial action. The delay had become so great in 1867 that the Department Commander, Brigadier General Irvin McDowell,¹⁸ ordered the release of prisoners who

14. Roger Jones was a graduate of West Point, class of 1851, and began his military service as a brevet second lieutenant of Mounted Rifles. After an assignment as assistant quartermaster he became an assistant inspector general in 1861 and continued his service in that branch becoming a brigadier general in 1888. He died the following year. Hamersly, p. 546; Heitman, I, 582; Register, p. 239.

15. The Division of the Pacific included the States of California, Nevada and Oregon, and the Territories of Arizona, Washington and Idaho. McDowell, p. 3.

16. Report of Major Roger Jones in Report of the Secretary of War, 40th Cong., 2nd Sess., House Ex. Doc. 1 (Washington: 1867), pp. 83-85, Serial No. 1324.

17. Ibid.

18. Born in 1818 at Columbus, Ohio, Irvin McDowell received his early education in France before entering West Point in 1834. He was commissioned a brevet second lieutenant in 1838 and after a tour on the

had been confined for several months awaiting trial.¹⁹ The report of Major Jones concluded with a strong recommendation that the Territory of Arizona be designated a separate military department within the Division of the Pacific. Sacaton was recommended as the location of department headquarters.²⁰ The following year a similar recommendation was made, and it was finally approved in April, 1870.²¹ The new department

Canadian frontier, returned to West Point in 1841 as a tactical officer and adjutant. During the Mexican War, McDowell served as aide-de-camp to General Wool and later as his adjutant general. It was McDowell who received the dubious honor to lead the Union Army to its first major battle of the Civil War--Bull Run! The second battle of Bull Run was a more personal disaster to McDowell; he was severely criticized for his performance and never again employed in the field during the remainder of the Civil War. The post war years witnessed McDowell's shuffle from San Francisco back to the East, then to the South and again back to San Francisco where he retired in 1882 as a major general. Hamersly, p. 618; Heitman, I, 664; Register, p. 224; D. A. B., XII, 29-30.

19. Jones, Sec. of War Report, 1867.

20. Ibid. Derived from the Indian word zacati, a coarse perennial grass found along the Gila River, Sacaton was an old Indian settlement north of Casa Grande. Sacaton was made division headquarters for the Military District of Arizona in 1867. Will C. Barnes, Arizona Place Names (Tucson: University of Arizona, 1935), p. 372.

21. The Department of Arizona was established by General Order No. 41, War Department, Adjutant General's Office, April 15, 1870 and further promulgated by General Order No. 1, Department of Arizona, May 3, 1870. The Department included all of Arizona Territory and that part of California south of a line from the northwest corner of Arizona to Point Conception. See DAriz: GO & Cir. McDowell erroneously stated that the boundary line began at the northeast corner of Arizona (see p. 4). The accompanying map at the end of the book does properly delineate the boundary. Another work that gives descriptions of posts in Arizona Territory is Ray Brandes, Frontier Military Posts of Arizona (Globe: Dale Stuart King, 1960).

provided more autonomy to the local commander, and Crook would use this to advantage.

The military balance sheet showed far more liabilities, however, and it was to these that Crook turned his attention. In his first annual report as Department Commander, Crook outlined the major areas of concern. Transportation facilities were limited and, "with few exceptions, in bad condition; wagons falling to pieces by reason of shrinkage from the intense heat of the climate, and many mules unserviceable from want of proper care and knowledge."²² Animals and equipment for mounted troops were in an equally poor condition. The number of troops then assigned to the department were considered to be sufficient--one regiment and five companies of cavalry, and one regiment and three companies of infantry.²³ The number, however, did not reflect the true preparedness of the various units. At least one third of the cavalry were dismounted.²⁴ The army-issue saddles did not hold up well under the excessive heat of the country; the covering often broke at the cantle, and the "spreading" of the saddle usually injured the horse's back. Action on requests for ordnance supplies often took more than six months to complete.

22. Annual Report of Lieutenant Colonel George Crook (1871), in Report of the Secretary of War, 42nd Cong., 2nd Sess., House Ex. Doc. 1, Pt. 2 (Washington: 1872), p. 77, Serial No. 1503.

23. Annual Report of Major General John M. Schofield (1871), in Report of the Secretary of War, 42nd Cong., 2nd Sess., House Ex. Doc. 1, Pt. 2 (Washington: 1872), p. 66, Serial No. 1503.

24. Crook, Annual Report, 1871, p. 78.

In his second annual report Crook noted a considerable improvement in the conditions of transportation. Although the quartermaster, Major James J. Dana,²⁵ and his staff labored against the elements of nature and distance, transportation equipment was at least more efficient. Broken-down and worthless animals were condemned and sold at auction; and a savings in forage expenses was realized. New mounts were purchased for the cavalry. By the fall of 1872, the matter of transportation and troop mobility had improved to the point where Crook felt he could now conduct an aggressive and intensive campaign to concentrate the Indians on reservations--a plan that had been delayed for more than a year by President Grant's attempts to facilitate the "Peace Policy" in Arizona.²⁶

Mobility, Crook knew, did not guarantee success in battle; success also required expeditious use of troop resources.²⁷ A favorite

25. James J. Dana began his military career in 1855 as an artillery officer, but by the beginning of the Civil War he was an experienced quartermaster. Throughout the war, Dana demonstrated his ability in the service, rising to the rank of brevet brigadier general by 1865. He returned to the reorganized army in 1867 as a major and again steadily rose through the ranks to colonel in 1882. Dana retired from active duty in 1885. Hamersly, p. 391; Heitman, I, 352.

26. The attempts to enact the policy in Arizona, particularly by Vincent Colyer and General O. O. Howard, delayed Crook's plan for an immediate campaign against the Apaches. See Schmitt, pp. 163-176.

27. The principles of mass or concentration and the corollary economy of force are closely associated with mobility. The advances in the art of war have increased the potential value of communications to

strategem of the Army against Indian bands was to launch a winter campaign of converging columns of troops followed by a relentless pursuit. This required communications, and Crook was well aware of that important factor. His first annual report had emphasized the need for communications. Not only were many of the military posts considered to be in a bad state of repair, but also they were separated by space and terrain that made them virtual islands divorced from the mission of reasonable military response.²⁸ Crook recognized the pressing requirement for uniting his command into a more cohesive force. He also hoped to correct the isolated position of his department within the Division of the Pacific. Crook's first annual report revealed his sentiments on this matter:

Owing to the isolated condition of this department, and the scattered distribution of its posts, the construction of a telegraph-line from California to this country, with branches to some of the important posts, would not only be of great service, but would be economy to the Government.²⁹

the commander. The modern term "command control" incorporates these principles and the availability of timely communications. For a discussion of the principles of war see: Alfred H. Burne, The Art of War on Land (Harrisburg: Military Service Publishing Co., 1947), and U. S. Army, ROTCM 145-20: American Military History, 1607-1958 (Washington, 1959).

28. The living conditions, shelter and health, in Arizona were considered to be such that rotation of troops to and from the Territory were necessary in order to maintain acceptable troop morale and welfare. See Reports of Secretary of War, 1867-1871.

29. Crook, Annual Report, 1871, p. 78.

General John M. Schofield,³⁰ commander of the Division of the Pacific, concurred in these views, adding that the lack of communications between his headquarters and Arizona was "a source of embarrassment, delay, and expense."³¹ The General further stated that "Government aid" should be given to some telegraphic company for the extension of lines to Prescott and other important points in the Territory.³² The commanding general of the Army, William T. Sherman, also gave his support for a telegraph to Arizona. He agreed with Schofield that a state of war existed in Arizona. The crusty old veteran declared: "If General Crook, as department commander, is to be held accountable, he should be supplied more liberally with all the authority and power of the War Department to bring this condition of things to a permanent conclusion."³³ The

30. Born in 1831, John McAllister Schofield entered West Point from his native state of New York. He graduated from the academy in 1853 with a commission in the Artillery and served in the South for two years. His service during the Civil War was in primarily the Western Theater, the climax being a corps commander in the battles of Nashville and Franklin. After a confidential mission to Paris, regarding French interests in Mexico, Schofield spent several years in Kansas and Missouri before being assigned to command the Division of the Pacific. Schofield succeeded Sheridan as commanding general of the Army in 1888. He retired in 1895 and two years later died in Florida. Hamersly, p. 744; Heitman, I, 865; Register, p. 241; D. A. B., XVI, 452-454.

31. Schofield, Annual Report, 1871, pp. 68-69.

32. Ibid.

33. Indorsement of General William T. Sherman, in U. S., Congress, Senate, Executive Documents, 42nd Cong., 3rd Sess., Ex. Doc. 12, (Washington: 1873), p. 2, Serial No. 1545.

necessity for a telegraph to that Department, he concluded, offered no area for argument.

The concept of a telegraph system joining Arizona with important cities of the United States was not novel in 1871. Six years previous to Crook's recommendation, Governor Richard C. McCormick outlined the plan for such a telegraph facility in his annual message to the Second Legislative Assembly of Arizona Territory.³⁴ Through an organization chartered the year before, the Arizona Railroad Company, the Governor claimed negotiations were in process with "parties" in New York for the construction of a telegraph line across Arizona, connecting with Los Angeles and Denver via Prescott and Santa Fe.³⁵ McCormick further stated that the route was considered, even by those interested in the overland telegraph line, "the most practicable and valuable across the continent."³⁶ Governor McCormick repeated his interest in a telegraph for Arizona to the Fifth Territorial Legislature in 1868. In urging

34. A native of New York, Richard Cunningham McCormick first began a business career on Wall Street but soon turned to journalism, and as a reporter covered the Crimean and Civil Wars. He was appointed secretary of Arizona Territory in 1863 and in 1866 made governor. He brought with him to Arizona a small printing outfit and established both leading newspapers of the Territory, the Miner in 1866 and the Citizen in 1870. From 1869 until 1875, McCormick served as territorial delegate to Congress. U. S. Congress, Biographical Dictionary of the American Congress, 1774-1927 (Washington: 1928), p. 1255; D. A. B., XI, 610-611.

35. Territory of Arizona, Journal of the Second Legislature of the Territory of Arizona (Prescott: Arizona Miner Press, 1866), p. 50.

36. Ibid.

the legislature to forward a memorial to Congress for a railroad through Arizona, the Governor added that telegraph communications were completed to Santa Fe, New Mexico, and by connecting mails Arizona was receiving news from all parts of the world in ten days.³⁷ Congressman Legrande W. Perce, a lawyer from Natchez, Mississippi, introduced a bill in Congress in 1870 for aid in the construction of a railroad and telegraph line across the territories of New Mexico and Arizona.³⁸ Despite all this interest and comment, a telegraph through Arizona, connecting with any continental system, still remained a matter of conjecture at the end of 1870.

Crook did not let the issue die. In his annual report of 1872 he noted that the nearest telegraphic communication was Los Angeles, usually reached from Arizona by mail in seven days.³⁹ "There can be no doubt," he continued, "that the establishment of telegraphic communication with all the important points in the territory with the connecting lines outside, would be an advantage to the public service too great to be estimated."⁴⁰ The exact route of the line he deferred as being

37. George H. Kelly, Legislative History of Arizona, 1864-1912 (Phoenix: Manufacturing Stationers, Inc., 1926), p. 40.

38. U. S., Congressional Globe, 41st Cong., 2nd Sess., 161, Pt. 3 (Washington: 1870), 2220.

39. Annual Report of Lieutenant Colonel George Crook (1872), in Report of the Secretary of War, 42nd Cong., 3rd Sess., House Ex. Doc. 1, Pt. 2 (Washington: 1873), p. 77, Serial No. 1558.

40. Ibid.

"questions determined by proper officers."⁴¹ General Schofield again endorsed the comments of his subordinate. In forwarding the report of Crook, he also brought the attention of the Secretary of War to a special report prepared the previous December outlining the details of the proposed line and the estimated cost of construction.⁴² This report would later provide the needed substance to transform proposals into action.

A decision was made in San Francisco that San Diego would be the best point of connection with any proposed telegraph from Arizona and the existing system in California. The golden state was an early beneficiary of the telegraph. In July of 1853, a rudimentary line was strung through trees between several small towns in Nevada and the boom towns of Grass Valley and Auburn in California.⁴³ A telegraph between the business quarter of San Francisco, later called Telegraph Hill, and the bay entrance was established in September of 1853. This line was used for the signaling of vessels and was operated by Sweeney and Baugh of the Merchants' Exchange.⁴⁴ The following month the

41. Ibid.

42. Annual Report of Major General John M. Schofield (1872), in Report of the Secretary of War, 42nd Cong., 3rd Sess., House Ex. Doc. 1, Pt. 2 (Washington: 1873), p. 72, Serial No. 1558.

43. Alice L. Bates, "The History of the Telegraph in California," Historical Society of Southern California, IX, No. 3, (Annual: 1914), 181-187.

44. Ibid.

California State Telegraph Company completed a line from San Francisco through Stockton and Sacramento to Marysville.⁴⁵ This circuit was the precursor of a state system that was extended to Los Angeles in October of 1860. The following year, on the 24th of October, a message was flashed from Stephen J. Field, Chief Justice of California, to President Lincoln in Washington, D. C.⁴⁶ This marked the completion of Hiram Sibley's old dream of a transcontinental telegraph.⁴⁷

The building of the telegraph to Los Angeles in 1860 made San Diego the next California city to become hopeful of receiving the rewards of modern communications; but nine years passed and the distance to Los Angeles still had not been bridged by the electric age. The impatience

45. Ibid. A previous enterprise, the California Telegraph Company, attempted to build the line in 1852 but met with misfortune and was reorganized as the California State Telegraph Company.

46. Field's message was immediately followed by a message from Horace W. Carpentier, President of the Overland Telegraph Company, and also addressed to President Lincoln. Both men took that opportunity to voice their support of the Union and express the belief that the transcontinental telegraph would strengthen that bond with the Federal Government. See Robert Luther Thompson, Wiring A Continent (Princeton: University Press, 1947), pp. 367-368.

47. Hiram Sibley had amassed a fortune by the time he and Ezra Cornell chartered the Western Union Telegraph Company in 1856. The idea of a transcontinental telegraph did not appeal to his co-directors and Sibley worked on his own to secure a government subsidy of \$40,000 for ten years and came to terms with his Pacific rival to build the transcontinental telegraph. Hiram Sibley was also a noted philanthropist, being one of the incorporators of Cornell University, builder of the library, Sibley Hall, at the University of Rochester and founder of Sibley College. D. A. B., Vol. XVII, pp. 145-146; Thompson, pp. 264-265.

of the citizens was editorialized in the San Diego Union in 1869, pointing to the frustrations of uncertain mail service, lack of knowledge on the scheduled arrivals or departures of ships "and a thousand other demands for communications with the metropolis of the Pacific."⁴⁸ The editor then suggested that the citizens were thinking seriously of incorporating a San Diego Telegraph Company to service their needs unless the "Telegraphic Monopolists"⁴⁹ took action. Meanwhile the talk of building a railroad and telegraph along the 32nd Parallel Route gave new hope to San Diegans that if they were being ignored in one sector another would come to their aid. The people of San Diego felt their location was the proper place for eventual submarine cables to the Hawaiian Islands, Japan, and China, and with telegraphic communications would become a major international center on the Pacific Coast. The first step--connection with a national telegraphic system--had still not materialized by the close of 1869.

The year 1870 was more promising for San Diego. Definite measures were taken in that year to join that port city with a telegraph from Los Angeles. In June, Gordon, Stewart & Company announced the receipt of a contract to distribute telegraph poles between San Diego and San Juan Capistrano.⁵⁰ By mid-June, a construction party was pushing

48. San Diego Union, February 20, 1869.

49. Ibid.

50. San Diego Union, June 2, 1870.

south from Los Angeles to Anaheim; and the following month the schooner Vaquero delivered 1,700 poles along the coast north of San Juan Capistrano.⁵¹ That mission town was reached by the construction party from Los Angeles at the end of July.⁵² The citizens of San Diego became more excited in August at the nearness of the telegraph. An office was already established in the Horton building on Sixth Street and Mr. John Strouhon, the telegraph operator, proudly allowed some citizens "a peep into the battery room, where the lightning is bottled up, ready for use."⁵³ On the 20th of August the line was completed and Mr. A. E. Horton, a prominent resident of New San Diego, wired news of the event to Mr. Fred MacCrellish of the Alta Californian in San Francisco. MacCrellish replied with congratulations "by lightning" and trusted "the iron wire" would soon be followed by "iron rails".⁵⁴ It was Arizona that still remained beyond the touch of the Morse key.

51. San Diego Union, July 14, 1870.

52. San Diego Union, July 28, 1870.

53. San Diego Union, August 11, 1870.

54. San Diego Union, August 25, 1870.

CHAPTER II

COST ESTIMATES AND ENCOURAGING WORDS

Roger Jones returned to Arizona in 1871. He had been promoted to the rank of lieutenant colonel and by now was the Inspector General of the Division of the Pacific. He probably recalled with some satisfaction his recommendation in 1867 that ultimately led to the designation of Arizona Territory as a separate military department. Now, as he toured the territory again early in 1871, Jones was convinced anew of the need for improvement in communications. He left Arizona before Crook had arrived to assume command; but Jones was determined to press the issue of telegraphic communications to Arizona.¹ His subsequent report did help to generate action.

The matter of building a telegraph line to Arizona was turned over to the Acting Quartermaster General of the Division, Lieutenant Colonel Robert O. Tyler,² a veteran artilleryman and wounded hero of

1. Prescott Weekly Arizona Miner, June 3, 1871.

2. Born in 1831, Robert O. Tyler continued a family tradition of military service. After graduating from West Point in 1853, he served in the West until the outbreak of the Civil War. The severe wounds Tyler received during the Civil War were a factor in his constantly declining health and he died in 1874, a few weeks prior to his forty-third birthday. Hamersley, p. 822; Heitman, I, 977; Register, p. 241; D. A. B., XIX, p. 94.

Gettysburg. His staff began the compilation of data in November of 1871. The first step was to approach Western Union, the assumption being that government aid to a telegraph company was the most feasible course of construction. Tyler discussed the proposal with James Gamble, general superintendent of the Pacific Division of Western Union and an old hand at telegraph construction.³ He had been the foreman of the construction crew that strung the wire from San Francisco to Marysville in 1853; and the honor of sending the first message over that line was accorded to Gamble in appreciation of his efforts.⁴ Eight years later Gamble increased his fame as a telegrapher by being placed in charge of the construction of the western portion, from San Francisco to Salt Lake, of the transcontinental telegraph. The Army had turned to a competent man for advice.

Gamble expressed interest in the proposed telegraph and verbally agreed that the Western Union would build such a line at cost. He further agreed that any labor and transportation furnished by the Army could be deducted from that total cost.⁵ At that point in the discussion

3. The Pacific Division of Western Union comprised the territory west from Utah to the coast. Bates, p. 187.

4. Ibid. See also Thompson, p. 345.

5. Tyler to Kelton, in U. S. Congress, Senate, Executive Documents, 42nd Cong., 2nd Sess., Ex. Doc. No. 14, (2 parts; Washington: 1872), 1, 3, Serial No. 1478. Cited hereafter as Executive Document, 1872.

the matter was primarily one of conjecture. Although some major locations had been determined, such as San Diego and Maricopa Wells, the exact route of the line had not been determined. Neither men were familiar with the country to the south. Tyler returned to his office, therefore, with only a vague agreement. Until he could present Gamble with more detailed information, the proposed telegraph would remain in the realm of discussion.

Colonel Tyler immediately began to gather the needed information. He wrote to Lieutenant Colonel John C. Kelton, Assistant Adjutant General of the Division,⁶ requesting the Division Engineer furnish a topographical sketch, drawn to scale, of the area between San Diego and the posts in Arizona Territory. Tyler also asked for information regarding a feasible route and the location of timber suitable for telegraph poles.⁷ It was Inspector General Jones, not the Division Engineer, who replied to Tyler's inquiry on the timber supply. The country west of the Colorado along the proposed route was destitute of timber suitable for the purpose,

6. John Cunningham Kelton, born in 1828, also spent his first years in the Army on frontier duty in the West. Soon after the beginning of the Civil War, Kelton was appointed to the staff of General Halleck and shortly afterwards transferred from the Infantry to the Adjutant General's branch and became the Adjutant General of the Army in 1889. Kelton was noted for his many suggestions leading to improvements in small arms and published writings on matters ranging from the use of the bayonet to pigeons as couriers. Hamersley, p. 553; Heitman, I, 590; Register, p. 239; D. A. B., X, p. 314.

7. Tyler to Kelton, Executive Document, 1872, 1, 3.

Jones stated, but cottonwood poles could be obtained in sufficient quantities from the bottomlands of the Colorado and the Gila for the portion of the line east from Fort Yuma to a distance of seventy-five miles. The poles would have to be cut above Fort Yuma and floated down river to that post. Jones was also certain that the mountains east and west of Prescott would provide the timber for poles when the line was extended to that area of Arizona.⁸ This estimate was confirmed by Paymasters who had traveled through the area.⁹

Armed with this information, Tyler again approached Gamble on the subject of construction. The main points along the proposed telegraph line had now been determined. San Diego would be the western terminus. Moving east, the line would pass through Yuma and then Maricopa Wells to Prescott. A branch line would extend from Maricopa Wells to Tucson. The wagon routes that paralleled these projections would determine a delineable route for the telegraph line; and the distance was measured as 628 miles.¹⁰

Gamble was now able to make a more precise estimate of construction costs. He based his initial figures on twenty poles to the mile, at one dollar each. Wire for the same distance would cost sixty dollars,

8. Jones to Kelton, Executive Document, 1872, 1, 4.

9. Tyler to Kelton, Executive Document, 1872, 1, 3.

10. Schofield to Townsend, Executive Document, 1872, 1, 1.

while glass insulators would cost twelve dollars to the mile. An additional expense of ten dollars per mile for incidentals and superintendent's pay brought the total to \$242 for one mile of telegraph. The total cost of construction was rounded off at a tidy \$150,000!¹¹ In this impressive price tag, Gamble had included the necessary instruments, batteries, and station equipment. The cost of construction, he went on to say, might be appreciably reduced by use of government transportation and labor.¹²

Gamble was anxious to make it clear that Western Union interests were in the construction of the line, not in its operation. Commercial prospects in Arizona were too limited to justify the Western Union building and operating a line under government subsidy unless that subsidy placed the company "beyond all contingencies of loss." It was Gamble's conclusion that the military could build the line more economically, and that the operation of a military telegraph would result in a large annual savings to the government.¹³

Gamble's view of the situation convinced General Schofield that army construction of the line was necessary to reduce the cost and win support for an appropriation. Colonel Tyler began preparing a budget,

11. Gamble to Tyler, Executive Document, 1872, 1, 4.

12. Ibid.

13. Ibid.

and Gamble was now asked to submit a cost estimate for material. Recalling from a previous conversation with Gamble that Western Union had seasoned redwood poles in stock, Tyler asked their cost. What Gamble offered instead were three thousand sawed fir poles available at Seabeck on Hood's Canal, Washington Territory.¹⁴ He was willing to sell them for fifty cents each, and for an additional sixty cents he would guarantee their delivery to San Diego.¹⁵ Since the route was not subjected to snow, the number of poles per mile could be reduced to seventeen. As for wire, Gamble offered to furnish it at half the original cost if transportation was provided--thirty dollars per mile for No. 10 annealed iron wire. He also offered insulators at a reduced price, twenty-five cents each, while instruments and batteries would cost about \$120 for each station. Construction tools, Gamble estimated, would cost about \$200 per gang of workmen, and skilled workmen as foremen and wiremen to assist the troop laborers could be employed at a monthly wage of seventy-five dollars, gold value. His recapitulation of cost estimates now showed a far different figure--\$52.95 per mile, as contrasted with the original approximation of \$242.¹⁶

14. Hood Canal is an inlet off of Puget Sound and runs as far south as the Skokomish Indian Reservation. Seabeck is located on the south bank of the canal in Kitsap County.

15. Gamble to Tyler, Executive Document, 1872, 1, 6.

16. Ibid.

Tyler now had an estimate with substance, and he prepared a final report which included the costs of troop labor and transportation. His report emphasized the attempts at minimizing expenses in construction. The purchase of redwood poles from Western Union was necessary, Tyler felt, for that portion of the line between San Diego and Yuma;¹⁷ but he reiterated the supposition of Inspector General Jones that poles for the remainder of the line could be supplied from the timber resources within Arizona. One shipload was considered sufficient to transport the necessary material for the construction of the line from San Diego to Yuma.¹⁸ To Gamble's final cost estimate Tyler added twenty-five percent for transportation, tools and "contingencies"; this brought the cost per mile of construction, skilled labor prorated, to \$79.35. With the distance estimated at 628 miles, the total came to \$49,831.80. Added to that figure was the cost of instruments for four stations, \$480. The complete price for the proposed telegraph was then set at \$50,311.80.¹⁹

17. The Army eventually did purchase redwood poles, not the sawed fir poles first offered by Gamble. This has been determined by correspondence in records of the Office of the Quartermaster General relating to the construction and operation of the military telegraph in Arizona Territory, 1873-76, National Archives. This source is cited hereafter as OQMG:TG.

18. Tyler to Kelton, Executive Document, 1872, 1, 2.

19. Ibid.

Tyler's report was forwarded to Colonel Kelton, the assistant adjutant general, for command scrutiny. General Schofield found the report acceptable and prepared his letter of endorsement. Schofield repeated several of the findings of his Deputy Quartermaster and then suggested the ultimate savings the line would produce. The annual military expenditures in Arizona at that time were three million dollars, the General stated, and this "large business" was being carried on with "very imperfect mail facilities."²⁰ "It is not difficult to see," he continued, "that the comparatively insignificant cost of the proposed telegraph line would be more than reimbursed every year by the increased efficiency and economy in the transaction of business."²¹ Satisfied with the completeness of his proposal, Schofield mailed the special report to the Adjutant General in Washington.

General Schofield's report was received at the office of the Adjutant General, Brigadier General E. D. Townsend, on December 26 and forwarded the following day to Secretary of War Belknap. The report was endorsed with a request for appropriations and sent to Congress on January 6, 1872.²² Delegate McCormick was there, waiting to speak on behalf of the proposal; and his chance came on the 30th of January,

20. Schofield to Townsend, Executive Document, 1872, 1, 1.

21. Ibid.

22. Belknap to Congress, Executive Document, 1872, 1, 1.

before the Senate Committee on Military Affairs.²³ That the proposal had reached that point was happily noted in Arizona.²⁴

The Army, meanwhile, was gathering additional facts. One of the most influential officers in the service, Quartermaster General M. C. Meigs, had joined the proponents of the telegraph line.²⁵ Meigs had previously toured the territory and was convinced of the need for telegraph communications; he would later voice this conviction through McCormick. Meigs now instructed First Lieutenant Valentine Silva,²⁶ then an assistant quartermaster at Yuma Depot, to submit an additional estimate of construction costs based upon resources available in Arizona.

23. Prescott Miner, March 16, 1872.

24. Ibid.

25. Montgomery Cunningham Meigs graduated fifth in his class at West Point in 1836 and after a brief assignment with the artillery he served the next quarter of a century as a member of the Engineer Corps. In that capacity, Meigs was involved in numerous projects in Washington, D. C., to include expansion of the Capitol Building. After a short banishment to projects in Key West as a result of disagreement with Secretary of War John B. Floyd, Meigs was recalled to Washington to continue his various construction projects. In 1861, he and Lieutenant Colonel E. D. Keyes were placed in charge of a secret project for the relief of Fort Pickens, Florida. The success of the mission brought Meigs a colonelcy and the next day, May 15, 1861, he was promoted to brigadier general and appointed Quartermaster General. He died in office in 1892, recognized as one of the most prominent officers of his day. Hamersly, p. 631; Heitman, I, 702; Register, p. 222; D. A. B., XII, 507-508.

26. Valentine Mott Cuyler Silva entered the Army as a private in 1861 and rose to lieutenant by 1865. He was promoted to captain in July of 1872 but two years later resigned from the service. Hamersly, p. 758; Heitman, I, 887.

Silva was quite optimistic in his estimate. Although he acknowledged that wire and instruments would have to be procured in San Francisco, Silva felt all poles could be provided by local contract for twenty-five cents each.²⁷ This alone allowed for a considerable reduction from the figures then in Washington. Silva's final estimate, exclusive of "office material", was only \$13,386.63.²⁸ Though his total was quite low, Silva's opinion was respected because he was trained in telegraph construction. He also suggested that before construction of the line was approved an officer familiar with the area should make a thorough examination of the whole route, in order to ascertain the exact amount of material available in the different sections of the country and make a full report on the results.²⁹ Silva then recommended that an officer who had completed the established course of instruction under Brigadier

27. Silva to Meigs, Executive Document, 1872, 11, 1.

28. Ibid. In the term "office material", Silva included the usual registers plus instruments (keys and relays, etc.) and batteries.

29. Ibid.

General A. J. Myer, Chief Signal Officer of the Army,³⁰ be selected to supervise the construction.³¹

Captain James Lee, Silva's superior officer, endorsed the report with an even more optimistic view on the procurement of poles.³² Lee felt the swamp willows along the Colorado could possibly be obtained at a cost lower than that estimated by Silva, and if the poles were tarred at the bottom would last as long as the best poles in other climates. He also claimed that the Colorado Navigation Company had offered to transport the poles free of charge on return trips.³³ As to the selection of an

30. Entering the Army as an assistant surgeon, Albert James Myer was to prove a gifted officer. His interest in communications developed early in his career; while in medical school he had written a treatise on the use of the sign language for the deaf. It was while Myer was on duty in Texas that his interest in military communications was stimulated. The clear air and ability to see great distances prompted him to investigate the potential of visual communications. His subsequent report earned him the distinction of being the Army's first signal officer with the rank and pay of a major. At first he had no real function but the Civil War brought him and his method of communications considerable prestige. Semaphore and telegraphy were extensively utilized and primarily due to Myer's direction a systemized method of military communications was introduced into the Army. Myer continued as Chief Signal Officer after the Civil War and was promoted to the regular rank of brigadier general in 1880. Two months later he died at Buffalo, New York. Hamersly, p. 657; Heitman, I, 739; D. A. B., XIII, 374-375.

31. Silva to Meigs, Executive Document, 1872, 11, 1.

32. A Canadian by birth, James Grafton Carleton Lee received his commission as a volunteer from the state of Ohio. His entire military career was as a quartermaster. He reached the rank of colonel in 1897 and retired in August of 1900. Hamersly, p. 575; Heitman, I, 624.

33. Lee to Meigs, Executive Document, 1872, 11, 2.

officer to supervise the construction, Lee suggested his subordinate, Silva. Lee sent the report to General Meigs in Washington, who in turn endorsed it to Schofield in San Francisco with a comment that he also had seen vast quantities of willow along the Colorado below Yuma, suitable for telegraph poles. Meigs asked that the report be forwarded to the office of the Adjutant General in Washington, to which Schofield complied, and Silva's optimistic figures were then transmitted to Congress by Secretary of War Belknap on the 26th of March, 1872.³⁴ There the compiled reports and the original proposal were to languish for almost a year before being revived in a discussion on territorial appropriations.

Within Arizona, interest in the telegraph was keen. The territory was hardly a year old when the first private line was strung in 1865. In one of his reports that spring the surveyor general for New Mexico and Arizona, John A. Clark, noted that M. O. Davidson of the Arizona Mining Company had erected a private wire between the Cerro Colorado mine and the Enriquetta Mining Company, thirteen miles to the Southwest. This was "the first and only line" in the territory, while New Mexico was still waiting to establish a similar precedent.³⁵ Five years later Levi

34. Belknap to Congress, Executive Document, 1872, 11, 1. The lengthy routing of Silva's report was probably the thoughtful act of Meigs to maintain continuity of command channels; all correspondence relative to proposals and cost estimates on telegraph construction would pass from the Division of the Pacific to the Secretary of War.

35. Clark to I. M. Edmunds, Commissioner General Land Office, Washington, D. C., May 24, 1865. John A. Clark Collection, Arizona Pioneers' Historical Society.

Stewart, a Mormon, sent by Brigham Young to colonize Kanab, Utah, was asked by Young to have one of his daughters learn the operation of a telegraph as it was intended to extend the line of the Deseret Telegraph Company to Kanab and Pipe Springs. Ella Stewart was selected, and she practiced at Toquerville, Utah, on a wooden key for over a year. The line was completed in December of 1871, and Miss Rosalia Haight became the operator at Kanab while Miss Stewart assumed the responsibility at Pipe Springs.³⁶ This line was never extended into the more populated regions of Arizona, however, and in 1874 the Deseret Telegraph Company was merged into the Western Union.³⁷

Arizonans considered it the business of the Federal Government to build the telegraph. The editor of the Weekly Arizona Miner lauded "General Crook's project" and its prospects, "so that ere long, the soldiers and citizens of our territory will no doubt have the pleasure of bearing quickly the important news of the 'outside world'." The telegraph would atone for the past neglect of the Washington government toward the citizens of Arizona, the editor continued, which included "leaving them to the mercy of the Indian and Mexican cut-throats and robbers and of having never appropriated as much as one dollar toward opening the Territory by building a road." In time, the editor speculated, lines would

36. Barnes, p. 337. Miss Stewart later married Douglas K. Udall and moved to St. Johns in 1880.

37. Thompson. See chart following p. 422.

connect nearly all the "important towns and military posts in the Territory, so that, should war with Mexico or any other foreign country come on us, speedy preparation for attack or defense may be made." As for the immediate future, the telegraph would be used primarily to give information concerning movements of hostile Indians and to direct action against them.³⁸

On February 21, 1873, as the House Committee on Appropriations turned its attention to the proposed telegraph, Delegate McCormick was there to represent the Territory of Arizona. An appropriation of \$50,311.80, based on General Schofield's original estimate, was written into the sundry civil expenses of the government for the fiscal year ending June 30, 1874. This sum was designated "for the construction of a military telegraph from San Diego, California, via Fort Yuma and Maricopa Wells to Prescott, Arizona."³⁹ When McCormick noted that this language left out Tucson as a point of connection, the bill was quickly amended to include the Old Pueblo.⁴⁰

Speaker James G. Blaine was impressed with the zeal with which McCormick guarded the interests of his constituents, and perhaps

38. Prescott Miner, March 9, 1872.

39. U. S., Congressional Globe, 42nd Cong., 3rd Sess., 179, Pt. 2 (Washington: 1873), 1590.

40. Ibid.

never more than on this occasion.⁴¹ The Arizona delegate was loaded with facts to support the telegraph proposal. He began by noting that the history of the military telegraph had set the precedent for appropriations such as the one now before Congress. Five hundred thousand dollars had been appropriated in 1862 for the extension of telegraph lines for military use during the Civil War; and an additional \$275,000 had been voted in 1864 for the same purpose. In 1871 Congress gave authority to the Secretary of War whereby a telegraph line from Yancton, Dakota Territory, to Fort Randall and Fort Sully would be built; the reason for that line was military operations in the Sioux country. The Department of Arizona, McCormick pointed out, was the only one in which important military movements had been carried on for years without that "valuable auxiliary". Moreover, the cost of the proposed line was "exceedingly low" when one considered the length. McCormick agreed with Gamble that commercial business in the Territory was "not yet sufficient to warrant the organization of a company." "The enterprise," he declared, "properly belongs to the Government, and is in the direct interest of economy and efficiency."⁴²

McCormick went on to present the telegraph as a means of erasing points of contention between civilians and military. Instant

41. James G. Blaine, Twenty Years of Congress (Norwich: Henry Bill Publishing Co., 1886), II, 543.

42. Globe.

communication between the military in Arizona, San Francisco and Washington would have prevented

many of the differences between the citizens and the officers, many of the successful movements of the hostile indians and unsuccessful movements of the troops, a frequent waste of money, and much of the misrepresentation regarding civil and Indian affairs in Arizona which has puzzled the eastern press and confused Congress, the Departments, and the public for some years past.⁴³

While an improvement in military operations would undoubtedly result from the proposed telegraph, McCormick also referred to his conversation with Francis A. Walker, the late Commissioner of Indian Affairs,⁴⁴ who supported the idea of a telegraph as being "of the greatest value to the Indian Agents and to his office." Also to be considered was the psychological effect of the telegraph upon Indians. Even the most hostile of Indians seldom disturbed the telegraph but rather had a superstitious regard for it, and certainly the "silent wire" had proven its effectiveness in the Sioux country.⁴⁵ Perhaps Pesh-bi-yalti, as the Apaches were to call the "white man's talking wire", would be equally effective in Arizona.⁴⁶

43. Ibid.

44. Walker had entered the Army as a private at the outbreak of the Civil War and by 1865 had been breveted brigadier general of volunteers. His tenure as Commissioner of Indian Affairs was brief--November of 1871 to December of 1872--and was intended primarily to keep him in charge of the census program when lack of funds failed to retain him as superintendent of the 1870 census. D. A. B., XIX, 342-344.

45. Globe.

46. Bourke, p. 233.

McCormick's coup de grace was a letter from General Meigs which corroborated the arguments of the Arizonan. Meigs declared himself in firm support of the telegraph as a result of his own visit to the Territory. He was quite unsatisfied with the speed of mail service and declared that the money lost through errors in the letting of mail contracts during the summer of 1872 would have paid for the total cost of the telegraph.⁴⁷ On the resolution of Congressman James Garfield of Ohio, the telegraph was included as a miscellaneous expense of the War Department in the appropriations bill which became law on March 3, 1873, the last day of the regular session.⁴⁸ Pesh-bi-yalti was coming to Arizona.

47. Ibid. Several months earlier, McCormick had helped to insure support from Meigs by publicly lauding the general after his trip through the Territory. Yuma Sentinel, November 9, 1872.

48. U. S., Statutes at Large, XVII, Ch. 227 (Washington: 1873), 528. Excerpts of the appropriation for sundry civil expenses were later published by the War Department as General Order No. 40, Adjutant General's Office, March 21, 1873. S. E. Whitman is badly in error when he states in his book The Troopers (New York: Hastings House, 1962), p. 173, that the first appropriation was made in 1875. See Appendix I for the wording of the act.

CHAPTER III

PESH-BI-YALTI SPEAKS

The telegraph appropriation was hailed in Arizona as the news "most cheerfully received since the receipt of that which rid the Territory of one Stoneman."¹ McCormick was praised for his efforts.² The editor of the Yuma newspaper, the Arizona Sentinel, looked upon the appropriation as the most encouraging prospect in Arizona history.³ The editor of the San Diego Union also congratulated Arizona on its gain and took occasion to suggest the best route for the line through the country just east of the city.⁴ Journalists throughout Arizona and California looked upon the telegraph as another step in opening the territory of Arizona to further advancement in commerce and order. One writer viewed the telegraph as the device of demise for criminals, horse thieves, and absconding civil officers. The speed of justice through telegraphic communications would force the timid criminal to mend his ways while the

1. Tucson Citizen, February 22, 1873. Although the telegraph appropriation was not formally passed until March, approval of the bill by House and Senate committees was considered as being sufficient to ensure favorable action in Congress.

2. Ibid.

3. Yuma Arizona Sentinel, March 15, 1873.

4. San Diego Union, February 20, 1873.

bolder would be forced to emigrate to "more congenial localities". The telegraph was the precursor of progressive measures that could be condensed into the term "civilization".⁵ All this journalistic praise, however, would not create a telegraph line; that job was left to the Army.

Although the appropriation had been designated as an expenditure under Signal Service activities, the Quartermaster Corps was directed to arrange for the construction.⁶ On the 12th of March, 1873, Quartermaster General Meigs telegraphed Lieutenant Colonel Asher R. Eddy,⁷ Depot Quartermaster in San Francisco, to take preliminary steps necessary for the gathering of material for the new line.⁸ This was followed by a more detailed letter on March 15. Although funds had been appropriated, they would not be available until the 1st of July. Nevertheless, Eddy was instructed to make arrangements for troop labor, construction materials, and transportation. Any purchases from civilian organizations were to be made on the basis of payment after June 30.⁹ The letter also

5. Yuma Sentinel, March 15, 1873.

6. The act was listed under miscellaneous expenses of the War Department and charged to the Signal Office. See Globe, Appendix, 180, 273.

7. Asher Robbins Eddy was a native of Rhode Island. He entered West Point in 1840 and was commissioned a brevet second lieutenant in the 1st Artillery in 1844. He was breveted three times for service during the Civil War and in 1872 was promoted to the rank of lieutenant colonel. He died in 1879 in Malta while on leave from the service. Hamersly, p. 422; Heitman, I, 396; Register, p. 231.

8. Meigs to Eddy, March 12, 1873, OQMG:TG.

9. Ibid.

included printed copies of the congressional appropriation and associated papers.

General Schofield's staff, however, was somewhat hesitant to conclude contracts with civilians without actual funds. Schofield's Adjutant General, Colonel Kelton, queried the War Department as to the advisability of authorizing advertisements and contracts, suggesting that it would be better to wait until fall.¹⁰ Kelton's telegram was referred to General Meigs, who in turn sent a terse reply to do all that could be done under the circumstances, reminding Kelton that Schofield was aware of the desired early completion of the telegraph line by officials in Washington.¹¹ To preclude further misunderstanding, Meigs appraised Secretary of War Belknap of the evident hesitancy in San Francisco. The result was a firmly worded telegram to General Schofield authorizing immediate commencement of the project with the understanding that expenditure of funds to civilian contractors would not be made until July 1, 1873.¹²

The Quartermaster staff at the Division of the Pacific was spurred into action, and contracts were quickly made with various civilian companies. The telegraph instruments, insulators, and wire were to be purchased from the Electrical Construction and Maintenance Company of

10. Kelton to War Department, March 22, 1873, OQMG:TG.

11. Meigs to Kelton, March 27, 1873, OQMG:TG.

12. Townsend to Schofield, March 29, 1873, OQMG:TG.

San Francisco. This firm in turn subcontracted for the wire from the Pacific Wire Manufacturing Company, also located in San Francisco.¹³ At the same time personnel arrangements were being made. R. R. Haines, a Western Union employee, was hired on the 4th of June as Superintendent of Construction.¹⁴ Haines was, at the time of his appointment, manager of the Western Union office in Los Angeles.¹⁵ Other civilians hired were D. McKillop, George H. Wilson, and A. W. Ladd as foremen, and R. H. Howe, Thomas E. Atkinson, and W. B. Ellison as electricians.¹⁶

A similar action was taking place in the Department of Arizona. Captain George F. Price, then a company commander in the 5th Cavalry Regiment and commanding Fort McDowell, was selected as the senior officer in charge of troops during the construction of the line.¹⁷ Price

13. Between June 12 and August 23, the Pacific Wire Manufacturing Company produced 165,344 pounds of wire for issue to the Quartermaster's Department. Affidavit of J. Gray, October 12, 1875, OQMG:TG.

14. Haines to Allen, January 20, 1874, OQMG:TG.

15. Bates, p. 187.

16. San Diego Daily Union, November 19, 1873.

17. Nickerson to Price, June 12, 1873, OQMG:TG. Born in New York City, George F. Price moved at an early age to California and there received his commission as a first lieutenant in the Second California Cavalry in September of 1861. Two months later he was promoted to captain. His first service was in San Francisco but in May of 1862 he was transferred to duty in Nevada and commanded an expedition charged with the effecting of a peace treaty with the Paiutes. After service in the District of the Plains as acting assistant inspector general, Price was

was well-known throughout the territory and his knowledge of the country was a major factor in his selection. He turned over his company to Lieutenant Charles D. Parkhurst,¹⁸ and then proceeded to Prescott for instructions. At the Department Headquarters, Price was assigned his responsibilities by Major Dana. There he also met Haines, and the two planned their future actions, the first being a reconnaissance to determine the exact course the telegraph would follow.

The route of the telegraph had also become a matter of concern in San Francisco. The reason was quite different, however, in that the matter rested on the determination of the boundary between California and Mexico. The Army was disposed to place the entire line within United States Territory.¹⁹ To their probable embarrassment, the Army staff in San Francisco evidently discovered they had no complete or

appointed in 1866 as a second lieutenant of the 5th Cavalry. His first service with his new regiment was in occupation duty in the South and later he served on the staff of General Canby in the Carolinas. Price then returned to duty in the West and in March of 1872 rejoined his regiment in Arizona which was in the process of replacing the 3rd Cavalry in the Territory. Hamersly, p. 703; George F. Price, Across the Continent with the Fifth Cavalry, (New York: 1883), pp. 441-446.

18. A graduate of West Point Class of 1872, Charles D. Parkhurst received his first military assignment with the 5th Cavalry. In 1884 he transferred to the Artillery and remained in that branch until his retirement as a colonel in 1909. Hamersly, p. 679; Heitman, I, 711; Register, p. 261; Price, pp. 537-538.

19. Copy of extract of Special Orders No. 141, Headquarters, Military Division of the Pacific, August 7, 1873, OQMG:TG.

up-to-date information on the boundary survey. Colonel Robert Allen,²⁰ the new Division Quartermaster, therefore sent a telegram to Washington on April 11, requesting that the survey information and a map of the boundary area be furnished.²¹ The request was referred to the Chief of Engineers, Brigadier General Andrew A. Humphreys,²² for action; but the Quartermaster General's Office acted as staff coordinator. Again, there was possible embarrassment. The Chief Engineer's Office had only two

20. Robert Allen was a graduate of West Point and first served with the Artillery before joining the quartermaster service in 1846. He attained the rank of colonel in 1866 after being breveted several times for his service in the Civil War. He retired in March of 1878 and died in Switzerland in 1886. Hamersly, pp. 256-257; Heitman, I, 159; Register, p. 222.

21. Allen to Meigs, April 11, 1873, OQMG:TG.

22. Grandson of an eminent shipbuilder, Andrew Atkinson Humphreys graduated from West Point in 1831 with a commission in the Artillery. After serving in the Seminole War of 1836 he transferred to the Topographical Engineers and was engaged in numerous hydrographic projects particularly along the Mississippi River. In 1861 Humphreys was appointed to the staff of General McClellan and commanded a division in the Antietam campaign. His subsequent actions at Fredricksburg and Chancellorsville earned him the brevet to colonel. He commanded a division of the III Corps at Gettysburg and was breveted a brigadier general. Appointed Chief of the Corps of Engineers in 1866, he served in that capacity until his retirement in 1879. Humphreys was an active scientist and received a LL.D. from Harvard for his contributions to the field of engineering. Hamersly, p. 528; Heitman, I, 554-555; Register, p. 217; D. A. B., IX, 371-372.

copies of a map resulting from Major William H. Emory's survey of 1855,²³ and were unwilling to spare one.²⁴ That map was almost twenty years old and considered to be of no value because the roads, which the telegraph was to follow, were no longer used. A more direct stage road through the mountains had since been constructed.²⁵ The engineers suggested that the more recent survey by a civil engineer in charge of the Southern Pacific Railroad survey, was "the very thing needed by General Allen."²⁶ This brought up another problem; there was only one copy of that map in the engineer's office. A tracing was being made at that time, and it was agreed to that a second tracing was to be furnished to the Quartermaster General's Office. The General Land Office did not prove as cooperative. After considerable discussion, the Land Office agreed to provide copies of Emory's survey, but that map was composed of ten sections, and it would take two months to produce a copy.²⁷ The

23. The survey was conducted for the United States Boundary Commission as a result of the Gadsden Purchase. William H. Emory was a veteran of service in the Southwest, having previously served as topographer for Colonel Stephen Watts Kearney's Army of the West during the Mexican War. See William H. Goetzman, Army Explorations In The American West: 1803-1863, (New Haven: Yale University Press, 1959), pp. 127-141, 193-201.

24. T. W. Webster to Colonel Ludington, April 14, 1873, OQMG:TG.

25. Ibid.

26. Ibid.

27. Ibid.

perseverance of the Quartermaster General prevailed and a map was finally obtained on which both routes, that of Emory and that of the Southern Pacific Railroad survey, were indicated. This map was then mailed to San Francisco.²⁸

It was during this period that confusion arose as to who was actually going to build the line and at what cost. The editor of the Yuma Sentinel was of the opinion that Western Union would build the line from San Diego to Yuma; and from that river port the line that was to be extended into Arizona was the responsibility of Crook.²⁹ The editors of the San Diego Daily Union quoted an article published in the Prescott Miner which claimed the appropriation was insufficient.³⁰ Major Dana was named as the source of information, in which he supposedly stated that the fifty thousand dollars appropriated would only cover the cost of constructing a line between Prescott and Tucson; another fifty thousand would be needed to complete the line to San Diego. In view of this, the Union editors suggested, it would have been wiser to build the line from Prescott to St. George, Utah, there to connect with the transcontinental system. The article in the Miner was later declared in error by a member of the Quartermaster service. The estimates of Major Dana, it was

28. Undated note of Meigs, OQMG:TG.

29. Yuma Sentinel, May 3, 1873.

30. San Diego Daily Union, May 10, 1873.

asserted, were the cost of material for construction of the entire line; labor and transportation was to be supplied by the government.³¹ The cost of transporting men and material was chargeable to the regular transportation appropriations.³² The activities of Captain Price and Haines soon established the popular understanding that the telegraph was indeed a military endeavor.

The reconnaissance began at Prescott on June 29, 1873.³³ The route followed was a trail from Prescott to Peeples Valley,³⁴ passing midway between Walnut Grove³⁵ and Skull Valley,³⁶ past Antelope Peak³⁷

31. Ibid.

32. Townsend to Schofield, March 29, 1873, OQMG:TG.

33. Price to Dana, August 5, 1873, OQMG:TG. In a recapitulation of the construction Meigs erroneously states the reconnaissance began on June 28. See Meigs to Belknap, July 28, 1874, OQMG:TG.

34. Twenty-five miles southwest of Prescott, the valley was named after A. H. Peeples, an early pioneer of Arizona. Barnes, p. 324.

35. A settlement in Yavapai County on the Hassayampa Creek, the site was named for the grove of walnut trees. In 1846 there was an attempt by members of the first Territorial Legislature to move the capitol from Prescott to Walnut Grove. A dam was built at Walnut Grove in 1890 that later burst, causing the death of seventy persons. Barnes, p. 475.

36. The valley was so named because of the many exposed bones and skulls resulting from a massacre of emigrants by the Indians in 1865. Barnes, p. 410.

37. Named by A. H. Peeples after he had killed three antelope on the peak in 1863. This peak is located in Yavapai County; another Antelope Peak is located in Pinal County. Barnes, p. 19.

and down Weaver Creek³⁸ a short distance before turning directly toward Wickenburg. This was considered better than the route through Walnut Grove because it was shorter, "more easily worked",³⁹ and poles were offered at a more reasonable rate.⁴⁰ From Wickenburg the route followed the Hassayampa River to the station of the same name, then along the traveled road by way of Duppa's Agua Fria station⁴¹ to Phoenix. An older route past Point of Mountain to the junction of the Salt and Gila Rivers was believed to be too remote for general public use and lacked sufficient sources of water. After leaving Phoenix, the route was projected to Maricopa Wells, past the Pima Villages,⁴² and on to Sacaton and Florence. Major Dana had suggested a route from Maricopa

38. The creek, like many other terrain features of the area, is probably named after Pauline Weaver, a guide of A. H. Peeples. See Barnes, pp. 477-478.

39. Price to Dana, August 5, 1873, OQMG:TG.

40. Ibid. The lowest offer Price received on the Walnut Grove route was \$4.00 per pole.

41. Bryan P. D. Duppa was an Englishman, reputedly cashiered from the British Army. He first settled in Salt River Valley then moved to Agua Fria where he ran the stage station. Barnes, p. 137.

42. Located twelve miles east of Maricopa Wells, the location was an old stage station and Indian trading post. Barnes, p. 332.

Wells through Sacaton to Blue Water.⁴³ In addition to bypassing Florence, Dana's suggestion would have taken the line over rough terrain that Price felt would have been hazardous during the rainy season.⁴⁴ Florence was included in the projected route because of the generous donation of poles by citizens of that area.⁴⁵ From Florence the route passed through Picacho Station and Desert Wells,⁴⁶ past Point of Mountain,⁴⁷ and then on to Tucson. The reconnaissance party reached Tucson on July 13.⁴⁸ Water supply and public convenience had been considered in the projected route, and Price felt that even then miles of wire had been saved. The line distance from Prescott to Tucson was judged to be "inside of 240 miles."⁴⁹

43. Blue Water was a stage station of the old overland route, forty-five miles northwest of Tucson. The well at the station was known for its abundance of water. Barnes, p. 56.

44. Price to Dana, August 5, 1873, OQMG:TG.

45. Ibid.

46. Desert Wells was just a few miles beyond Picacho Station, and about thirty-six miles south of Florence. Barnes, p. 128.

47. Located in Pima County, Point of Mountain was another stage station about eighteen miles northwest of Tucson. There was another Point of Mountain, also known as Steeles station, in Cochise County. Barnes, pp. 340-341.

48. Tucson Citizen, July 19, 1873.

49. Price to Dana, August 5, 1873, OQMG:TG.

Early in the week following their arrival in Tucson, Price and Haines left for Maricopa Wells.⁵⁰ The route southwest from Maricopa Wells seemed to offer less selection and paralleled the road to Gila Bend. From there the projected line followed the general course of the Gila River, past Stanwix Station⁵¹ to Mission Camp.⁵² Here the line diverted from the course of the Gila River and instead went through a pass in the Gila Range directly on to Yuma. The distance of this section of the line was estimated to be about 175 miles.⁵³ Captain Price viewed this segment as presenting the most difficult of construction problems. It required clearing away of considerable undergrowth, and the surface of the mesa traversed was very hard. At one point Pirce had considered a route from Phoenix to Oatman Flat, following the north bank of the Gila River, but after careful examination of public surveys he was satisfied such a route was impractical.⁵⁴

50. Tucson Citizen, July 19, 1873.

51. A stage station started by King Woolsey, Stanwix was temporarily occupied by Confederate troops in 1862 and was probably the farthest west that Captain Sherod Hunter penetrated Arizona before meeting advance elements of the California Column. Barnes, p. 422.

52. Mission Camp was another stage station of the old Butterfield system, located thirty-two miles east of Yuma. Another road turned south from Mission Camp through Papago County into Mexico. Barnes, p. 280.

53. Price to Dana, August 5, 1873, OQMG:TG.

54. Ibid.

The line to run west from Yuma had to be entirely within United States Territory, and this required adding twenty-five miles to the original proposed route.⁵⁵ The portion of the line that was to run between "Emery's and New River"⁵⁶ was from three to seven miles south of the border. In order to stay within U. S. Territory, the line would have to pass through the Sand Hills west of Yuma. That terrain was void of water, and the moving sand would make the placing of poles extremely difficult.⁵⁷ After passing through the Sand Hills the route proceeded west to Indian Wells, then along the stage road. It then diverted from the stage route for thirty miles through several valleys and canyons along a partially completed county road. The line again joined the state road and paralleled that route for seven miles into San Diego.⁵⁸ The distance of the line from Yuma to San Diego was estimated to be just under 165 miles.⁵⁹ The reconnaissance party arrived at San Diego on

55. Ibid.

56. Ibid. The term "Emery's" refers to one of four stage stations owned by Colonel William Hemsly Emory and previously operated for the Butterfield Overland Mail. The four stations were: Cooke's Wells, Alamo Mocho, New River, and Laguna. Since Price was describing the route from east to west, "Emery's" is probably Cooke's Wells, the first station west of Yuma and below the California border. See Roscoe P. Conkling and Margaret B. Conkling, The Butterfield Overland Mail, 1857-1869 (Glendale: Arthur H. Clark Co., 1947), II, pp. 217, 219.

57. Ibid.

58. Haines to Allen, January 20, 1874, OQMG:TG.

59. Price to Dana, August 5, 1873, OQMG:TG.

August 2, 1873, completing a survey that Price felt was complete enough to allow construction to begin.⁶⁰

Three days after arriving in San Diego, Captain Price prepared a report of the reconnaissance for Major Dana.⁶¹ Price thought the venture a complete success. Along the way he and Haines had arranged contracts for the delivery of poles. Price explained that a rule was adopted at the beginning to discourage subletting of contracts. Twelve separate contracts were therefore made to preclude middlemen, and professional contractors were also avoided.⁶² Price found the people along the route willing to help in every way. In figuring the total cost of poles purchased, he later calculated the average cost per pole to be \$1.40.⁶³ Price was certain that the total cost of construction would be less than the appropriation; and the wire saved would allow for extension of the line to Fort McDowell, Fort Lowell, and probably Camp Verde.⁶⁴ Both he and Haines were certain that the entire line could be built inside of five months.⁶⁵

60. Ibid.

61. Ibid.

62. Ibid. See Appendix C.

63. Tucson Citizen, December 16, 1873.

64. Price to Dana, August 5, 1873, OQMG:TG.

65. Ibid.

Five days after Price and Haines arrived in San Diego, General Schofield issued an order to convene a board of officers "as soon as possible to determine the route of the line of the telegraph, to be wholly within United States territory."⁶⁶ Price, Haines, and First Lieutenant David J. Craigie⁶⁷ were named as members of the board. Material and men for the line, meanwhile, had begun to arrive. The Newburn out of San Francisco delivered forty tons of wire to Port Isabel, from there the load was transferred to a barge which was pulled up river to Yuma by the steamer Gila.⁶⁸ Yuma Depot became a major point for the disbursement of telegraph material throughout Arizona. The next trip of the Newburn brought a captain and eighteen enlisted men to act as escort for the construction teams.⁶⁹ In early August, foreman George H. Wilson and electrician R. H. Howe arrived in San Diego. They immediately left for Prescott from where they would commence construction of the eastern portion of the line.⁷⁰ Later in the month the schooner Johannes arrived

66. Special Orders No. 141, OQMG:TG.

67. Born in Scotland, David J. Craigie was commissioned a first lieutenant in the 8th Iowa Volunteers in September of 1861. Breveted twice for service in the Civil War, Craigie became a second lieutenant in the Regular Army in 1866. He subsequently rose to the rank of colonel in 1902. Hamersly, p. 379; Heitman, I, 334.

68. Yuma Sentinel, June 28, and July 5, 1873.

69. Yuma Sentinel, August 2, 1873.

70. San Diego Daily Union, August 12, 1873.

at National City with material for the western portion of the line.⁷¹

George Treanor and L. Arnold of San Diego were awarded contracts to deliver the material along the line between that city and Yuma.⁷²

The next step in personnel arrangements was the assignment of officers to take charge of the troop labor teams. Captain William E. Dove, 12th Infantry, was assigned the section between San Diego and Yuma.⁷³ The portion from Yuma to Oatman Flat, 100 miles, was given to Lieutenant G. B. McDermott, 23rd Infantry.⁷⁴ Lieutenant John F. Trout, also of the 23rd Infantry, was assigned the section from Prescott to Maricopa Wells.⁷⁵ Although Captain Price was the senior officer in charge of all construction, he also volunteered to take personal charge of the

71. San Diego Daily Union, August 23, 1873.

72. Ibid.

73. Entering as a private of the 126th Ohio Volunteers in 1862, William E. Dove rose to the rank of first lieutenant of volunteers in March of 1865. He re-entered regular service as a second lieutenant in 1866 and in September of 1873 was promoted to captain. His life came to an end by drowning in 1884. Hamersly, p. 41; Heitman, I, 381.

74. Born in Ireland and commissioned in 1862, George B. McDermott was dismissed from the service in 1874. Hamersly, p. 617; Heitman, I, 662.

75. John F. Trout entered the Army as a private in his home regiment of the 10th Pennsylvania Volunteers in 1861. By 1865, he had attained the rank of major of volunteers and was commissioned a second lieutenant in the Regular Army in 1866. In 1871 he was assigned to the 23rd Infantry. Trout retired from the service in 1883. Hamersly, p. 818; Heitman, I, 971.

line between Oatman Flat and Tucson, via Maricopa Wells.⁷⁶ Material was on hand and personnel assigned; the time had come to begin building.

The first pole placed in the ground was at San Diego on August 28, and done with little fanfare.⁷⁷ Captain Dove's team was escorted by Captain Harry C. Egbert and a detachment of men from Company B, 12th Infantry.⁷⁸ The setting of the first pole at Prescott was accomplished under more impressive circumstances. The dignitaries present for the occasion testified to its importance: Colonel Crook and his wife, Major and Mrs. Dana, and John H. Marion, editor of the Miner.⁷⁹ At 10 a. m. on September 2 an earth-turning ceremony was performed, and Mrs. Mary Crook was given the honor. This was followed by a bottle of wine broken over the wire by Mrs. Dana. The first pole was then raised amid the cheers of the spectators.⁸⁰ Marion made a speech; but Crook, when called upon for remarks, declined and asked Captain Azor H.

76. Price to Dana, December 22, 1873, OQMG:TG.

77. Ibid.

78. Receiving a direct commission as a first lieutenant in 1861, Harry C. Egbert breveted twice during the Civil War. He was promoted to captain in 1865 and subsequently achieved the rank of colonel in 1898. In that same year, he was appointed brigadier general of volunteers. The following year he was killed in the Philippines. Hamersly, p. 425; Heitman, I, 399.

79. Tucson Citizen, September 13, 1873.

80. Ibid.

Nickerson, his Adjutant, to speak for him.⁸¹ As all good adjutants, Nickerson played the role for all it was worth. He reviewed the work leading to the construction, and in so doing lauded Crook, Generals Schofield and Sherman, and Delegate McCormick.⁸² Throughout the ceremony the 23rd Infantry Band serenaded the spectators.

The construction teams, while predominantly Army, were not men of the Signal Service and had no experience in telegraph operations. Their progress, under civilian experts, gave no indication of being a novice enterprise. On October 14 Haines wrote a letter from Maricopa Wells to Colonel Eddy outlining the progress of construction to that date. The team from San Diego had come to a point ninety miles east of that city. Lieutenant Trout's party had reached Phoenix, and Haines felt the line would be completed to Maricopa Wells in ten days. The team under Lieutenant McDermott had progressed forty-five miles east from Yuma. A fourth group had been organized to build the line west from Maricopa Wells and had completed ten miles. Haines felt certain that the line between San Diego and Prescott would be completed around November 15. The construction party from Prescott was to begin building the line to

81. First serving as an officer of volunteers, Azor H. Nickerson became a regular officer in 1866. After serving with the 14th Infantry he was transferred to the 23rd Infantry in September of 1866. In 1868 he was promoted to captain, then to major in 1878. Nickerson retired in 1882. Hamersly, p. 663; Heitman, I, 748.

82. Tucson Citizen, September 13, 1873.

Tucson after reaching Maricopa Wells. Haines again made an estimate regarding that segment, declaring Tucson would be reached by December 1.⁸³

The people of Arizona were given much news on the progress of construction, though some of it was conflicting.⁸⁴ J. A. Moore of Maricopa Wells reported to the Citizen that about 250 miles of line had been built by mid-October, and that the line was being strung at the rate of twelve miles a day.⁸⁵ Captain Price, who made a point of informing the newspapers of the latest developments, appreciated the role of the journalists, for he had once been the editor of the Yreka Union of California.⁸⁶ When he arrived in Yuma at the end of October, Price quickly reviewed for the Sentinel the progress of construction. Captain Dove's team, then sixty miles to the west, was expected to reach Yuma in fifteen days. The crew working east from Yuma had reached Stanwick Station, while the team from Maricopa Wells was at Kenyon Station.⁸⁷

83. Haines to Eddy, October 14, 1873, OQMG: TG.

84. The newspapers of Arizona often conflicted with one another regarding the progress of construction. Most of the discrepancies were probably due to time and distance from the area of actual construction.

85. Tucson Citizen, October 18, 1873.

86. Yuma Sentinel, August 16, 1873.

87. Yuma Sentinel, November 1, 1873. Kenyon Station, named after the operator, Henry Kenyon, was located on the south bank of the Gila River, fifteen miles west of Gila Bend. Barnes, p. 232.

Price believed the line from Prescott to Yuma would be completed by the 8th of November, and by the 12th all the way to San Diego. Construction of the branch line from Maricopa Wells to Tucson was to begin at once-- and be finished before the 1st of December.⁸⁸

Captain Price was not far off in his estimates. On the morning of November 11, the telegraph key in Prescott chattered an electric echo from Yuma--the line was in and working!⁸⁹ Numerous messages were immediately exchanged, but one of the first to be received in Prescott was particularly important to Crook. General Schofield had sent a telegram to Los Angeles, there to be mailed to Prescott. The telegram had reached Yuma just as the line to Prescott was opened, and the message was again transmitted by telegraph. The message was only two sentences, but for Crook they were words for great satisfaction; he had been a brigadier general since the 29th of October! Crook had made an extraordinary step in rank, bypassing the grade of colonel. This was in recognition of his success in the Yavapai campaign during the previous winter. A "grand hop"⁹⁰ was held that evening in honor of Crook's promotion.

The next step was to join Arizona with California, and that came at 1 p. m. on the 18th of November.⁹¹ William E. Smith, manager of the

88. Ibid.

89. Tucson Citizen, November 15, 1873.

90. Tucson Citizen, November 22, 1873.

91. San Diego Daily Union, November 19, 1873.

Western Union office in San Diego, received a call flashed over the line from Yuma--"S. D."⁹² Smith sent an immediate reply to which Yuma answered: "Here we are, 'SM', on the west bank of the Colorado River. All well, Capt. Dove and officers of Fort Yuma send greetings. Mc." "Hurrah!" was the response from San Diego, "kind regards to all. Tell Dr. Rose although he took the olives to Yuma in a keg, the Dove has shown up at last. Sm." Back from Yuma came the reply: "That pleases them. We adjourn to drink your health. Mc." After a few more words were passed the eastern operator said; "We are all ready to cross the river. I will connect these wires and turn you loose in Arizona." Five minutes later Haines came on the line and began working the key. "Hello, Smith; glad to see you! Welcome to Arizona! Here is a pile of messages. How do I come? Haines." "Come splendid. Shake 'em up lively,"⁹³ Smith replied. Within minutes congratulations were being passed over the line from Prescott to San Diego. A cannon was fired at Fort Whipple to celebrate the event.⁹⁴ Arizona was joined with the "outside world".

92. Ibid. "S. D." was the call for San Diego to come on the line. After contact was made, operator call signs were used; "SM" for Mr. Smith and "Mc" for Mr. McKillop.

93. Ibid.

94. Prescott Miner, November 22, 1873.

CHAPTER IV

THE LINE MOVES EAST

While dignitaries continued to congratulate one another, Captain Price and Haines were on their way back to Maricopa Wells to begin construction of the line to Tucson. The "Tucson Division", as it was later named, was begun on the 13th of November, and soon the construction developed into a race against statistics. In seventy-eight days, 417 miles of wire had been strung,¹ an average of almost five and one half miles per day. Price was out to shatter that mark. At the end of ten days, he and his crew had constructed sixty-seven miles of line. In three days, twenty-nine miles had been completed; and in one day alone, thirteen miles of line were constructed.² According to the editor of the Tucson Citizen, this excelled the speed of construction of the Pacific Coast telegraph. It was not long before Price was being hailed as the "champion telegraph builder."³

1. San Diego Daily Union, November 19, 1873.

2. Tucson Citizen, November 29, 1873.

3. Tucson Citizen, November 29, 1873. The transcontinental telegraph, from Omaha to Carson City, was built in a little over four months. Considering that the laborers under Price and Haines were inexperienced in telegraph construction, the Arizona military telegraph was completed in a very respectable time. A man hour comparison would be necessary to judge who was the real "champion telegraph builder."

The outskirts of Tucson were reached on the afternoon of December 1, as Haines and Price had predicted. Price had built the line in sixteen working days at an average of seven miles a day.⁴ Haines declared that the feat "beat anything he had ever heard in his twenty-three years of telegraph experience."⁵ Early the next morning the line was strung into the town, and the final connection finished by 10 a.m. One hour later Price sent the first telegram to Captain A. F. Rockwell,⁶ Quartermaster at Yuma Depot. The message simply read: "It is finished." Back came a single word in reply: "Selah."⁷ Price then wired Douglas Gunn and William J. Gatewood, newspaper editors in San Diego: "The Arizona military telegraph is completed. The wire now connects San Diego with her 'back country'." And he added a bit of verse:

The lightning message of thought
Obeys man's proud decree

4. Tucson Citizen, December 6, 1873.

5. Ibid. Mr. Haines sent Captain Price a telegram from Maricopa Wells on December 2 congratulating and praising him for the speed in which the line was built. It was the telegram that became the source quoted in the Citizen. See OQMG:TG.

6. After service as an officer of volunteers, Almon F. Rockwell was commissioned in the regular service as an assistant adjutant general and in 1867 transferred to quartermaster service. Rockwell was Superintendent of Public Buildings from 1881 to 1885. He retired as a lieutenant colonel in February of 1897. Hamersly, p. 728; Heitman, I, 840.

7. Tucson Citizen, December 6, 1873.

And mountains, answering, echo back
The voices from the sea.⁸

But Price had to move quickly aside for John Wasson, editor of the Citizen. Soon the telegrapher's key was making a constant chatter of congratulations.⁹

The Arizona military telegraph was less than a month old when Captain Price sat down to write his report of construction.¹⁰ Haines had since left for his home in Los Angeles,¹¹ and from there traveled to San Francisco where he would also write a report on the same subject.¹² The two men had parted good friends; but their subsequent reports would lead to a controversy, less than a year later, that removed any feeling of comradeship between them. Haines' report was complimentary in every respect; Price, on the other hand, was critical in some of his observations. He acknowledged, with satisfaction, the accomplishments of the previous five months; 540 miles of telegraph line, requiring 9,820

8. Ibid.

9. Congratulations were also expressed officially as a General Order published for command distribution. Schofield, Kelton and Crook all conveyed their appreciation for the work achieved by the builders of the telegraph. General Order No. 41, DARiz: GO & Cir.

10. Price to Dana, December 22, 1873. OQMG:TG.

11. Yuma Sentinel, December 13, 1873.

12. Haines to Allen, January 20, 1874, OQMG:TG. Included in his report was a list of the stations, locations, names of operators and their pay. See Appendix E.

poles, had been built in ninety-seven days.¹³ As a result of reconnaissance and frugality, there was a surplus of nearly one hundred miles of wire plus one thousand brackets and insulators.¹⁴ The cost of construction was later reported to be \$47,557.97.¹⁵ In all, a considerable telegraph system had been built at a relatively low cost.

It was, however, the very emphasis on economy, Captain Price suggested, that caused unwise construction methods and use of sub-standard materials.¹⁶ Although the best wood available in the Territory was used, the number of poles was insufficient. Price believed that the standard twenty poles to the mile, instead of seventeen, would have been the more prudent approach. He also felt that the poles themselves were not of acceptable size; they should have been twenty feet in length, 6" x 6" at the butt and 4" x 4" at the tip.¹⁷ The poles obtained from Arizona resources were only eighteen feet in length. He doubted that any of the poles were long enough to be reset, but perhaps mesquite butts could be

13. Price to Dana, December 22, 1873, OQMG:TG.

14. Ibid.

15. Transportation expenses, totaling \$16,749.93, were charged against the regular army transportation appropriation. Extra duty pay for enlisted men, amounting to \$614.62 was paid from appropriations for incidental expenses. Meigs to Belknap, July 28, 1874, OQMG:TG.

16. Price to Dana, December 22, 1873, OQMG:TG.

17. Ibid.

cut and placed in the ground beside the poles and securely wired to them.¹⁸

Price made a guess at the length of time the various poles would last before requiring replacement: eighteen months to three years for the cottonwoods, and for the willows probably three to five years.¹⁹ The redwood poles, of course, would last much longer and actually outlive parts of the wire.²⁰

The wire itself was the main point of Price's criticism. He believed that No. 9 galvanized was the appropriate type. Considering the climate and sparsely settled country, however, both wire and poles probably would "answer until such time as improved means of transportation penetrate the territory."²¹ But this did not excuse the contractors.

A portion of the wire used was of inferior quality breaking readily with a slight strain and where making joints; and, a considerable portion of it was old, evidently having been used on other lines, taken down, repaired, and coiled for sale, as opportunity presented, which opportunity appears to have shown itself in this line, where a small sum of money was forced to go a long way.²²

18. Ibid. To this day such mesquite butts may be found along the old telegraph and stage route north of Mobile, Arizona.

19. Ibid.

20. One such pole, along with a telegraph key and messages, is on display at the Arizona Pioneers' Historical Society.

21. Price to Dana, December 22, 1873, OQMG:TG.

22. Ibid.

Price's report was forwarded by Major Dana to the Division of the Pacific, and eventually it was incorporated into a report submitted to the Secretary of War by General Meigs.²³ Not until the spring of 1875, however, were his words to be contested.

The accomplishments of 1873 whetted appetites for further progress in 1874. In June Congress authorized the Secretary of War to "construct a telegraph line for the protection of the frontier population against Indian and other depredations."²⁴ During that same month another bill was passed, appropriating \$4,000 to extend the telegraph to Camps Verde and Apache.²⁵ On June 30 the Chief Signal Officer was directed by the War Department to assume charge of the entire system of military telegraphs authorized by Congress in 1873 and 1874.²⁶ Second Lieutenant Theodore Smith, 15th Infantry, was assigned on

23. Meigs to Belknap, July 28, 1874, OQMG:TG. In quoting the Price report, Meigs left out the word "evidently", giving a more positive tone to the accusation that inferior wire was used.

24. Annual Report of General Myer (1874), in Report of the Secretary of War, 43rd Cong., 2nd Sess., House Ex. Doc. 1 (Washington: 1875), p. 519, Serial No. 1635.

25. Both Hinton and Elliott are in error by stating the appropriation was \$40,000. It would seem that a typographical error was perpetrated by Elliott. See Richard J. Hinton, Handbook to Arizona (San Francisco: Payot, Upham & Co., 1878), p. 318; Wallace Elliott, History of Arizona Territory (San Francisco: Elliott Publishing Co., 1884), p. 319.

26. Myer, Annual Report, 1874, p. 519.

August 22, 1874, to take charge of the line from San Diego into Arizona.²⁷ Lieutenant Smith was an energetic man with practical experience in the telegraph. He had enlisted in the signal service, was trained in telegraphy and weather observation, and upon completion of his training was given the rank of observer-sergeant. In 1871 the Chief Signal Officer recommended to the Secretary of War that during each of the years 1872 and 1873 one sergeant, who during the year was "reported as most distinguished for fidelity and ability," be commissioned.²⁸ Smith was the first to receive that distinction.²⁹

The new Signal Officer arrived in Prescott on the 1st of October,³⁰ and by November 9 the line to Camp Verde was complete and in good working condition.³¹ Lieutenant Smith then turned his attention to Camp Apache. The original plan was to extend the line from Camp Verde, but Smith believed it would be cheaper and of more service to build through

27. Captain A. F. Rockwell had since taken charge of the line from Captain Price. This is determined by correspondence of that period. See OQMG:TG.

28. Annual Report of General Myer (1873), in Report of the Secretary of War, 43rd Cong., 1st Sess., House Ex. Doc. 1, Pt. 2, (Washington: 1873), p. 318, Serial No. 1597.

29. Ibid., p. 235. Theodore Smith was a native of Germany. In October of 1877 he was promoted to first lieutenant, the rank he held at his death in June of 1884. Hamersly, p. 771; Heitman, I, 903.

30. Tucson Citizen, October 3, 1874.

31. Tucson Citizen, November 14, 1874.

more posts, Indian reservations, and settlements.³² The new line would instead run from Tucson to Camp Apache and include Camp Lowell and Camp Grant. Smith arrived in Tucson on Sunday, the 29th of November, and on December 4 he and R. H. Howe began a reconnaissance to determine the best route for the line.³³ Their particular interest was the section between Camp Grant and Camp Apache. Smith planned to return to Tucson and gather the telegraph supplies; Howe, meanwhile, would form a work crew and then stake out the route so that poles could be set at proper intervals. Pine poles from the government mills at Apache and Grant were to be used for the line.³⁴

Lieutenant Smith returned to Tucson on the evening of December 23, traveling through deep snow and heavy rains.³⁵ He judged the line would be 217 miles in length, from Tucson to Camp Apache, and ninety miles from Grant to Apache. Most of the route was considered easy terrain to traverse, but there was one section where the line would pass over mountains and rocky ground, probably slowing down the construction crew. The line from Thomas to Grant would cross the road twice and pass "just back of W. A. Smith's station on the San Pedro, thence via Point of

32. Ibid.

33. Tucson Citizen, December 5, 1874.

34. Ibid.

35. Tucson Citizen, December 26, 1874.

Mountain, thence to Grant, thence down the Gila Valley to the crossing of the Gila, seventeen miles above San Carlos and thence in a direct line to Apache."³⁶ Since there was no permanent post at San Carlos, a station would be established at Gila Crossing, a few hours away by courier. Smith reported that poles were abundant in the Graham Mountains and in the mountains between the Gila River and Camp Apache.³⁷ A mule pack train had already left Camp Verde for Camp Apache, loaded with wire for the line.³⁸

Howe returned to Tucson late in January, 1875. He and eight soldiers with fifteen animals had left Camp Apache December 24.³⁹ The crew did not stake out the line between Apache and old Camp Goodwin, but Howe estimated that by trail the distance would not exceed sixty miles and poles would only be required for thirty-five miles of that section of the line. There were enough trees through the remaining distance on which the wire could be attached.⁴⁰ Howe did stake out the line from Goodwin to Camp Grant and then on to Tucson. He had reduced the length of the line to just over 185 miles. Howe believed the ground

36. Ibid.

37. Ibid.

38. Tucson Citizen, December 12, 1874.

39. Tucson Citizen, January 30, 1875.

40. Ibid.

from Goodwin to Fort Lowell was firm enough to allow loaded teams to travel the route without trouble. There was, however, a hill near Tres Alamos, about thirty-eight miles from Lowell, that required road work before loaded wagons could travel over it. Lieutenant Smith had meanwhile gone to San Diego. He was expected to return by the middle of February and begin actual construction of the line.⁴¹

The distribution of poles along parts of the proposed line began on the 1st of February.⁴² Lieutenant Smith did not return to Tucson until the 23rd of February.⁴³ Three days later he informed the Citizen that the line had been staked out from Tucson to Camp Lowell.⁴⁴ By the first week of March, the line was completed.⁴⁵ Two wires led out of Tucson, one to turn east, the other west. The wires were put on crossbars attached to the poles, and this prompted the editor of the Citizen to comment that it looked rather "citified".⁴⁶ The construction of a line five and three-quarters miles to Camp Lowell was rather easy; that to Camp Apache would be another matter.

41. Ibid.

42. Tucson Citizen, February 6, 1875.

43. Tucson Citizen, February 27, 1875.

44. Ibid.

45. Tucson Citizen, March 6, 1875.

46. Ibid.

A new telegraph bill was passed in Congress on the 3rd of March, 1875. The bill authorized the construction of a line connecting Santa Fe with Tucson, passing through Forts Craig, McRae and Selden, the towns of Las Cruces and Messilla, and Forts Bayard and Bowie.⁴⁷

The appropriation was based upon correspondence between Congress and the War Department. General Schofield, General Philip H. Sheridan, and General Sherman all supported the construction of the line,⁴⁸ and General Myer provided the estimates.⁴⁹ Again, troop labor was advocated to reduce the cost of construction. The proposed line was in important link in the telegraph system along the southwestern border.⁵⁰

47. Prescott Miner, March 6, 1874. Actually the act only named Fort Marcy, Fort Bayard and Camp Grant as specific points along the telegraph line. The article in the Miner was probably based upon local assumptions that later proved correct. See Appendix I for the wording of the act.

48. General Sheridan, although at the time commanding the Missouri Division, gave his personal support to the proposed line in an endorsement to the Secretary of War. Sheridan was a classmate of Schofield and Tyler. "Little Phil" made a phenomenal rise in rank during the Civil War and Grant considered him one of his most aggressive subordinates. In 1884 he succeeded General Sherman as commander of the Army and in 1888 was bestowed the rank of general by Congress. Sheridan named Fort Sill in honor of his classmate Joshua Woodrow Sill. U. S. Congress, House, Executive Documents, 43rd Cong., 1st Sess., Ex. Doc. No 204 (Washington: 1874), p. 1, Serial No. 1610. Hamersly, p. 754; Heitman, I, 881; Register, p. 241; D. A. B., XVII, pp. 79-81.

49. Executive Document, No. 204, 1874, p. 1.

50. See map, Appendix B.

Lieutenant Smith had charge of the new line between New Mexico and Arizona, but in June of 1875 he was replaced by Second Lieutenant Philip Reade.⁵¹ When Reade arrived in Arizona in July, he found that little progress had been made on the line between Camp Lowell and Camp Apache. There had been problems in receiving wire from San Francisco, and civilian contractors had failed to deliver poles promptly.⁵² Although Smith had received orders from Crook in March for procurement of tools,⁵³ the actual distribution of poles along the line did not begin until June.⁵⁴ On the 1st of July a team of nine soldiers, under the charge of a non-commissioned officer, began construction of the line from Camp Lowell.⁵⁵ A second construction party of twenty-five men, headed by Sergeant E. W. Boutelle, began building the line from Camp Apache on July 27.⁵⁶ Hiram C.

51. Annual Report of General Myer (1875), in Report of the Secretary of War, 44th Cong., 1st Sess., House Ex. Doc. 1 (Washington: 1876), p. 106, Serial No. 1678. Reade had entered West Point in 1864 but did not graduate. Instead he received a direct commission in 1867 as a second lieutenant in the 3rd Infantry. During the Spanish-American War he was major general of volunteers. Hamersly, p. 713; Heitman, I, 819; Register, p. 258.

52. Annual Report of General Myer (1876), in Report of the Secretary of War, 44th Cong., 2nd Sess., House Ex. Doc. 1 (Washington: 1877), p. 119, Serial No. 1747.

53. Tucson Citizen, March 13, 1875.

54. Tucson Citizen, June 26, 1875.

55. Myer, Annual Report, 1876, p. 119.

56. Ibid. Reports in the Citizen during that period conflict with the Chief Signal Officer report regarding the number engaged in the project. The Citizen of October 9 stated that Sgt. Boutelle had thirty men in his crew.

Hodge, making a tour of Arizona, reported to the Citizen in October that he had visited the telegraph camp of the Camp Apache Division which was then located on the north side of the Gila River, fifteen miles below old Camp Goodwin.⁵⁷ At the time of his visit forty miles of wire had been strung, but the terrain proved to be very difficult. Sometimes poles had to be carried by the men themselves for distances of eight miles from the point of wagon delivery.⁵⁸ Lieutenant Reade had meanwhile gone to Santa Fe to make arrangements for the construction of the line between New Mexico and Arizona.

The line from Camp Apache had been extended seventy miles by the 2nd of November, and supports had reached a point ten miles from Camp Grant.⁵⁹ In the following week the line from Camp Lowell was completed to Camp Grant,⁶⁰ but the connection through to Camp Apache was delayed because the appropriations had been exhausted.⁶¹ That line

57. Tucson Citizen, October 9, 1875.

58. Ibid.

59. Myer, Annual Report, 1876, p. 119.

60. Tucson Citizen, November 20, 1875. General Myer's annual report of 1876 conflicts with the date reported in the Citizen. Myer stated that the line to Camp Grant was not completed until February 28, 1876. Myer, Annual Report, 1876, p. 119.

61. Myer, Annual Report, 1876, p. 119.

was not completed until October of 1877.⁶² Meanwhile, the energies of Lieutenant Reade and his men were turned toward the construction of the telegraph connecting Arizona and New Mexico. R. H. Howe and his party, having traveled to Fort Craig over the North Star road,⁶³ met Reade at Fort Craig. Howe told the Lieutenant that he was in favor of that route, trees being abundant and water plentiful.⁶⁴ The North Star road, however, would pass well north of the towns of Mesilla and Las Cruces, and instead the proposed route was changed to include those New Mexican communities. At Fort Craig Lieutenant Reade also met Colonel A. V. Duzer, a retired officer again in the service of the Signal Corps to assist in the survey of the telegraph lines in New Mexico. The two gentlemen rode on to Santa Fe together to complete the reconnaissance.⁶⁵

62. Annual Report of General Myer (1878), in Report of the Secretary of War, 45th Cong., 3rd Sess., House Ex. Doc. 1 (Washington: 1878), p. 181, Serial No. 1848.

63. Named after the North Star Mine, the road ran from Mimbres to Beaverhead in New Mexico along the west slope of the Black Range. The U. S. Forest Service rebuilt the road between 1933 and 1938. T. M. Pearce, New Mexico Place Names (Albuquerque: University of New Mexico, 1965), p. 110.

64. Tucson Citizen, October 30, 1875.

65. Tucson Citizen, October 30, 1875. Although addressed in the article as colonel, with experience in the military telegraph during the Civil War, the name A. V. Duzer does not appear in either Heitman or Hamersly.

In November Lieutenant Reade advertised for purchase of poles for the New Mexico-Arizona telegraph.⁶⁶ The contracts called for the delivery of poles along the route, which generally paralleled a good wagon road.⁶⁷ Poles were to be of pine, oak or cedar, twenty-two feet long and not less than eight inches in diameter at the bottom, with the bark well peeled. Timber not acceptable for poles were cottonwood, willow, aspen, and poplar. The specifications were also spelled out for public information. Poles were to be set in the ground at a depth of three and one-half to four feet, depending on the condition of the soil. Distance between the poles would be seventy yards and one foot, or twenty-five to the mile.⁶⁸ Reade also described the method of placing the insulators on the poles and the stringing of the line. It was evident that Reade was building a telegraph to last!

What began as a great project to link Arizona with New Mexico came to a halt early the following year. Funds had been exhausted, and the civilian employees were discharged. This was the gloomy news that Howe brought back to Tucson in February of 1876.⁶⁹ But Lieutenant Reade was a hard man to discourage. If he could not buy poles he would beg

66. Tucson Citizen, December 4, 1875.

67. Ibid.

68. Ibid.

69. Tucson Citizen, February 26, 1876.

for them, and beg he did. Meetings were held from Tucson to Las Cruces, and Reade pleaded his case before the people. Tucsonans were told in July that only the section between Camp Grant and Ralston remained as the communications gap between them and New Mexico. He wanted poles to complete that gap and to replace rotten poles in other sections of Arizona.⁷⁰ Reade had a good selling point, for he reminded the citizens of Tucson that they were the beneficiaries of the cheapest telegraph rates in the world.⁷¹ He followed this reminder with a subtle taunt: "If continued telegraphic communications be desired, it behooves the citizens to be no less public-spirited than our New Mexican neighbors."⁷² Silver City had donated 200 poles; Balencia County gave 625; the citizens of Bernalillo County provided 1,000 poles at half cost; the people of Mesilla and Las Cruces had contributed \$1,500; and farmers along the Rio Grande had turned out with their oxen and wagons to haul poles free of charge.⁷³ Reade also admonished Arizonans for the price of poles: "When fine pine poles, hauled forty miles in New Mexico, can be purchased for half a dollar each, it seems strange that Arizona dealers should charge four times that figure for an inferior cottonwood."⁷⁴ The editor of the Citizen added

70. Tucson Citizen, June 8, 1876.

71. Ibid.

72. Tucson Citizen, July 8, 1876.

73. Ibid.

74. Ibid.

his own challenge: "In New Mexico the press, the people and the military combined to help along an enterprise, governmental in its nature, but essentially by the people and for the people. Will Arizona do likewise?"⁷⁵ Editor Wasson and Reade suggested that a meeting be held to test Tucson's pride.

A meeting was held in the public schoolhouse on Monday, July 10.⁷⁶ Sidney De Long⁷⁷ was elected chairman of the assembly, and John Wasson appropriately was given the job of secretary.⁷⁸ Lieutenant Reade then addressed the gathering, beginning with a history of the military telegraph in Arizona to that date, after which he launched upon his effort to gain material support for the needs at hand. He reiterated the fact that the distance between Camp Grant and Ralston, New Mexico, was all that remained to complete the "southern overland military telegraph".⁷⁹ At the same time poles were needed as replacements along the original line. All of this, Reade continued, would have to be accomplished in the

75. Ibid.

76. Tucson Citizen, July 15, 1876.

77. Sidney R. De Long was one of the principal characters involved in the Camp Grant massacre. He, along with one hundred others, was tried and acquitted. The trial did not adversely affect his local prestige because he became the first mayor of Tucson in 1872. Tucson Arizona Daily Star, November 25, 1914.

78. Tucson Citizen, July 15, 1876.

79. Ibid.

face of a congressional reduction of the Signal Corps which might force abandonment of the telegraph line rather than impair the main functions of the corps.

Lieutenant Reade had voiced his support of continuing the military telegraph to Colonel August V. Kautz,⁸⁰ the new Department Commander.⁸¹ He also had advocated an increase in the Signal Corps and providing General Myer with a staff that would make his service free from the evils of detailing men from the "line" to Signal Corps duty.⁸² These recommendations, however, were made when Congress was bent on austerity; and a reduction in force was the legislative answer.⁸³ This was the bleak picture presented to the citizens in the schoolhouse. Reade was determined, nonetheless, to follow the telegraph project through to a successful conclusion, and the citizens of Tucson responded with a similar spirit.

80. Like Theodore Smith, August Valentine Kautz was a native of Germany. He first served in the Army as a volunteer during the Mexican War and then entered West Point in 1848 as a classmate of George Crook. After graduating in 1852 he served in the Northwest. His record during the Civil War earned him six brevets, the last being to major general. He returned to regular service as a lieutenant colonel in 1866 and by 1891 was again a general. He retired in January of 1892. Hamersly, p. 549; Heitman, I, 586; Register, p. 240; D. A. B., X, 263-264; Andrew Wallace, "General August V. Kautz in Arizona, 1874-1878," Arizoniana, IV, No. 4, (Winter, 1963), pp. 54-65.

81. Tucson Citizen, September 2, 1876. The article was derived from Reade's letter to Kautz on December 28, 1875.

82. Ibid.

83. Tucson Citizen, July 15, 1876.

Lieutenant Reade was able to announce in August that Tucson was willing to contribute nine hundred poles toward completing the line to New Mexico.⁸⁴ Construction of the line was resumed, and by April an article in the Citizen informed Tucsonans that telegraphic communication with New Mexico was near at hand.⁸⁵ That occasion came during the first week of May, 1877.⁸⁶ Arizona was at last linked, both east and west, by a military telegraph that would eventually stretch from the Pacific to the Gulf of Mexico and provide the territory with a multiple route of communications with the outside world. That same year, however, marked the beginning of the end of the military telegraph in Arizona. The seeds of its destruction were being planted in the form of iron spikes.

84. Tucson Citizen, September 2, 1876. Kautz had also thrown his support behind Reade. In August, a general order was issued requiring the various post commanders to issue tools and materials to Reade but the order was softened by the usual stipulation that the items would be furnished as could "be spared without injury to the military service." General Order No. 27, August 19, 1876, DARiz: GO & Cir.

85. Tucson Citizen, April 28, 1877.

86. Tucson Citizen, May 5, 1877.

CHAPTER V

MORE WORDS, MORE WIRE

The Quartermaster Corps had planned and built the telegraph from San Diego to Prescott and Tucson, but then found itself temporarily saddled with the responsibility of operating and maintaining the line. This was a job for which the Quartermaster was not fully prepared, and the line became a stepchild with no true parent to watch over it. The immediate needs, those of operators and maintenance, were satisfied through contracts and direct payments for services. The operators were civilians who usually received a compensation equal to \$100 and one ration per month!¹ Many of these operators also performed maintenance on the line, but others also assisted in repairs and were paid from Quartermaster funds appropriated for the telegraph.² Regulations for the operation of the line were printed and distributed, as well as forms for the reporting of various information connected with the telegraph.³

1. See Appendix E. A ration issue was equal to three meals a day for one month.

2. See Appendix D.

3. See Appendix G for an example of a station report and Appendix H for an example of a compiled monthly report of telegraph stations in the Department of Arizona.

General Meigs, however, was quick to suggest that, for better regulation of the line, operators from the Signal Corps should be assigned.⁴ This was the first move in returning the stepchild to its lawful parent.

Another question soon arose regarding the operation of the telegraph line--money! The appropriation of March, 1873, allowed for construction of the line, but no mention was made in the bill for operating expenses or the disposition of proceeds. General Meigs presented this question to the Secretary of War in May of 1874. Could the revenues from the line, Meigs asked, be used in the operation of the telegraph? He noted that the regulations for operation of the line provided for "an accounting system of money collected, but no distinct orders as to what the disposition of the money should be."⁵ Meigs felt that such revenues should be regarded as miscellaneous receipts and not used unless appropriated by law. General Meigs was evidently well apprised on the use of government funds; a check by Secretary Belknap's office disclosed that an act passed in 1849 did in fact prohibit the use of revenues from the line for payment of expenses incurred.⁶ This matter was presented to Congressman Arnold Coburn, House Chairman of the Committee on

4. Meigs to Belknap, January 26, 1874, OQMG:TG.

5. Meigs to Belknap, May 22, 1874, OQMG:TG.

6. U. S., Statutes at Large, IX, Ch. 110 (Washington: 1851), 398.

Military Affairs, and received swift action.⁷ In the bill passed on the 23rd of June, allowing for extension of the telegraph to Camp Verde and Camp Apache, a stipulation was made that the Secretary of War was authorized to pay the operating expenses of the lines in Arizona out of proceeds from messages transmitted; any balance remaining was to be turned over as miscellaneous receipts. Money received during a given fiscal year would be used only for expenses of that year. The bill charged the Chief Signal Officer with the construction, repair, and operation of the line.⁸ Similar stipulations were written into the act of March 3, 1875 providing for construction of the telegraph between New Mexico and Arizona.⁹

The Signal Corps began taking formal charge of the various existing and proposed lines in July of 1874. By November 1st military operators had replaced civilians at all stations except San Diego, Prescott, and Tucson.¹⁰ There still remained the matter of transfer of funds.

7. Belknap to Coburn, June 2, 1874, OQMG:TG.

8. See Appendix I.

9. See Appendix I.

10. Myer, Annual Report, 1875, p. 105. The Signal Corps had already gained considerable experience in telegraph operations during the Civil War. By 1865, the corps had built over 15,000 miles of line. In 1872, General Myer issued a manual on field and fixed telegraph systems. It was this type of information that Reade used in describing the construction of the telegraph in 1876. A brief but useful discussion of the military telegraph is found in Thompson, pp. 380-405.

Several officers in the Department of Arizona were appointed to disburse money for construction, and there was some confusion as to how much had been spent. Finally in October of 1874 it was determined that part of the unexpended funds, \$4,858.93, was in the accounts of Colonel Asher R. Eddy, Depot Commander at San Francisco.¹¹ General Schofield was instructed to have Eddy turn the money over to First Lieutenant Henry Jackson, Property and Disbursing Officer of the Signal Office.¹² Any other money remaining after completion of payment for construction was to be turned back to the Treasury, as well as proceeds from the line prior to July, 1874. Proceeds after that date were also to be turned over to Lieutenant Jackson.¹³

In 1870 the Signal Corps had been assigned the mission of weather forecasting.¹⁴ General Myer had visualized this function not only as one of commercial value but also a logical adjunct to the telegraph, thereby promoting new operations within his diminishing

11. Townsend to Schofield, October 19, 1874, OQMG:TG.

12. Henry Jackson was a native of England. He entered the army as a private in the 14th Illinois Cavalry and rose to the rank of first lieutenant in the 5th U. S. Colored Cavalry in May of 1865. He was mustered out of the volunteers in 1866 and became a second lieutenant in the 7th Cavalry that same year. He retired as a colonel in May of 1901. Hamersly, p. 537; Heitman, I, 567.

13. Townsend to Schofield, October 19, 1874, OQMG:TG.

14. Joseph M. Hawes, "The Signal Corps and its Weather Service," Military Affairs, XXX, No. 2 (Summer, 1966), 68-76.

service.¹⁵ In August of that year, recruiting for the new Signal Corps mission began; and soon a course of instruction was started at Fort Whipple, Virginia. Persons who completed the course of instruction were awarded the rank of Observer-Sergeant and assigned to stations where, with their instruments, they would make periodic reports by telegraph. At 7:35 on the morning of November 1, 1870, the first "systematized synchronous meteoric" report was made in the United States.¹⁶ The Signal Corps began the first public issue of "Weather Synopsis and Probabilities" in February of 1871. It was not long before the program was extended throughout the nation, and Arizona was included in 1874. Prognostications were crude, but a start had been made. Weather reports were often published in the local papers and the telegraph demonstrated yet another value by allowing citizens of Tucson to have up-to-date reports from other parts of the territory.

General Crook had first proposed the telegraph when hostile Indians were still roaming throughout the territory. He envisioned the telegraph as a means of employing his troops against the various bands throughout Arizona. The completion of the telegraph, however, came after the successful Yavapai campaign of the winter of 1872-73. With many

15. Ibid.

16. Annual Report of General Myer (1871), in Report of the Secretary of War, 42nd Cong., 2nd Sess., House Ex. Doc. 1 (Washington: 1872), p. 262, Serial No. 1503.

Indians concentrated in reservations, the telegraph assumed a new function--instant news of Indian defections. The success of such employment of the telegraph was affirmed by Quartermaster General Meigs in his annual report of 1874. Chief Signal Officer Myer, in his report for that year, commented that the material size of the army was augmented by

one of the most powerful aids to make that force anywhere, in a threatened district, available, to enable it to be concentrated anywhere for the purpose of defense or pursuit, and to permit it to be in the power of the commanding general to know almost the course and location of raiding parties, as their movements are studied with the aid of telegraphic reports on the maps before him.¹⁷

The words of General Myer were justified by events late in 1877 when Hot Spring and Chiricahua Apaches bolted the San Carlos Reservation. The ensuing campaign to return the renegades to the reservation was largely coordinated by telegraph, and within a month 190 surrendered at Fort Wingate.¹⁸

It was not just the renegade Indian that felt the effect of the new age of communication; criminals soon found that distance from their

17. Myer, Annual Report, 1874, p. 519.

18. J. P. Dunn, Massacres of the Mountains (New York: Harper & Bros., 1886), p. 639. A more comprehensive account is found in W. H. Carter, From Yorktown to Santiago with the Sixth U. S. Cavalry (Baltimore: Friedenwald Co., 1900), pp. 189-193. Communications relative to these events are found in the general correspondence files, A. G. O., R. G. 94, 1877, including many telegrams.

crimes was no longer a passport to immunity from local law. The Citizen recounted such a tale of swift justice in July of 1876.¹⁹ Three men had stolen horses in Phoenix and made their way south toward the Mexican border, but news of their thievery preceded them. The sheriff's office of Tucson was forewarned by telegraph of the possibility that the thieves would pass through his area. The prediction proved correct, for three men fitting the description of the criminals were discovered riding across the open ground to the east of town. Subsequently they were arrested south of town on the road to Sonora. The horse thieves were then turned over to officers from Phoenix, "cursing the telegraph for all that was out."²⁰

Civilian commerce also benefitted greatly from the military telegraph. Rates were lower than those of Western Union, and the line was nearly self-sustaining through revenue collected from private messages.²¹ Soon after the telegraph was completed to Prescott and Tucson, rates were published in the newspapers and the editor of the Citizen assured Tucsonans that the military system would "afford the public at

19. Tucson Citizen, July 29, 1876.

20. Ibid.

21. Annual Report of General Meigs (1874), in Report of the Secretary of War, 43rd Cong., 2nd Sess., House Ex. Doc. 1 (Washington: 1875), p. 124, Serial No. 1635.

large the best and cheapest terms consistent with public service."²²

Newspapers began to carry a section devoted to "Telegraphic News", containing the latest information on national and world events. Military matters also became better publicized.²³ The telegraph operator became an important member of the community. His movements, either from town to town or along the telegraph for repair work, were closely followed in the newspapers. His job was viewed as one requiring integrity. In his hands the telegraph could either be good or bad. The San Diego Daily Union described him in this manner:

He is the possessor of the earliest tidings of life or death, of war and rumors of war, of fire, flood and tempest, and frequently, of the weightiest secrets. He can tell many a tale of woe, error, sin, or shame, and it would seem that such knowledge would not be coveted, but rather shunned, as making life too sorrowful. But experience proves the contrary, for as constant dropping wears away the stone, so ever-recurring events, sorrow and sadness, come to be regarded as in the line of business, and finally almost fail to move the heart, until nothing short of a horrible murder, flashed over the quick wires and through the sympathizing instruments, will arouse the dulled feelings. His position is one of great difficulty, also, because he has a sacred charge to keep, and many are

22. Tucson Citizen, November 29, 1873. See Appendix F for telegraph rates. Public spirit was demonstrated when Morris Goldwater, feeling no operator was forthcoming, offered his services and his store to the military telegraph. Correspondence relating to Goldwater is found in OQMG:TG.

23. Evidently this practice was abused, because by 1877 military telegraph operators were forbidden to release general news items to the press and newspapers received information through normal syndicate channels and official sources. Hinton, p. 319.

the temptations offered to induce a hint of his superior knowledge of the affairs of men to those around. But, though bound by no oath and under no bond save that of honor, he rarely betrays his trust.²⁴

One of the most unusual tasks performed by a telegraph operator took place at Camp Grant in April of 1876. Miss Clara E. Choate had traveled to Arizona to marry Mr. W. H. Story, but found no minister available to perform the ceremony. The telegraph came to the rescue and Rev. Jonathan Mann, a Methodist minister in San Diego, performed the services over the telegraph and the couple was judged legally wed.²⁵

The telegraph was also cause for personal antagonisms. William J. Berry, editor of the Yuma Sentinel, publicly expressed his consternation over the discourtesies he received from "that cus of the Arizona Miner."²⁶ The occasion was the result of the opening of telegraph communications between Yuma and Prescott in November of 1873. Berry printed the facts for judgment by "a candid world". He had the honor of sending the first civilian telegram over that portion of the line. The addressee was John Marion, editor of the Prescott Miner, and the message was simply a congratulatory dispatch announcing the "joyfull event". Naturally a reply was expected, but none came even after a second message

24. San Diego Daily Union, January 9, 1874.

25. San Diego Daily Union, April 6, 1958.

26. Yuma Sentinel, November 22, 1873.

was sent. "Can anything," Berry asked, "be more uncivil or discourteous?" Perhaps Marion, that "rusty old batchelor", had finally succumbed to the enjoyment of his recent "connubial" life.²⁷ Thus Berry felt the time had come for an eulogy: "Alas, poor Marion! We ne'er shall look upon his like again! We write this more in sorrow than in anger. Adios Amigos."²⁸

There was a lighter side to the effect of the telegraph. The Indians generally viewed the line with suspicion from a distance; but two Apache scouts, Alchisay and Velenay, had a direct experience with Peshbi-yalti. In June of 1874 the two Indians from the White Mountain reservation spent an enjoyable week in Prescott. During their stay they were taken to the telegraph office where they dictated a message to their friends at Camp Apache, telling of their experiences in the town and when they expected to return home.²⁹ While Alchisay and Velenay were at the

27. Ibid. Marion had just married Flora E. Banghart. She later ran away with Charles B. Rush, the District Attorney whom Marion had supported during the political campaign. See J. H. Marion, Notes of Travel Through The Territory of Arizona, ed. Donald M. Powell (Tucson: University of Arizona Press, 1965), p. 11.

28. Ibid. A look at the front page of the Sentinel during that period would give an indication of the outspoken character of its publisher and editor. Under the name of the publication were the two phrases "Independent In All Things" and "Neutral In Nothing".

29. Yuma Sentinel, June 20, 1874.

office, a message was received reporting the attack by soldiers on the rancheria of Eskinela and the death of that chief. The news astonished the two scouts; one of them was not convinced of the reliability of the line until he had personally followed the wire five miles out of town. Returning, he grudgingly accepted the fact that the wire did go all the way to Tucson. As a parting demonstration of the telegraph's mysterious powers, the two Indians were administered an electric shock from the line: Alchisay and Velenay left the office "with mingled fear and disgust."³⁰

Even a basically simple arrangement of wood and wire required maintenance and repair from the hazards of nature and man. This must have been quite evident to Captain Price when one of the first messages he received on completing the line to Tucson was an order from General Crook to investigate a matter of probable line repair. The line between Stanwix and Teamsters Camp³¹ was reported as being so low where it crossed the road, both wagon traffic and communications might be impaired.³² Thus began a new task for men of the military telegraph, a never-ending job of keeping the line in working condition. The greatest taskmaster was nature. In late January of 1874, a severe storm swept

30. Ibid.

31. Eighty-six miles east of Yuma, Teamsters Camp was a camping place on the old stage road to Tucson. Barnes, p. 439.

32. Crook to Price, December 4, 1873, OQMG:TG.

the territory.³³ The Gila, Salt, and Colorado Rivers reached flood stage, and Yuma was partially submerged in water from two to six feet in depth. That same storm downed many sections of the telegraph line from Phoenix to Yuma.³⁴ Thereafter, almost every report of a storm was followed by a report of telegraph lines being down somewhere between San Diego and Yuma.³⁵ The region north of San Diego, however, was just as important to Arizona until the line was completed to New Mexico in 1877. The frequent winter floods in California often severed communications between the Division of the Pacific and the Army command in Arizona. Each case of line interruption required a tedious survey along the route to find the break, resetting of poles and splicing of the line, and then a further check of the line to insure that was the only break. Repair stations were established at intermediate points to reduce the time lost in checking line interruptions.³⁶

33. San Diego Daily Union, January 31, 1874.

34. San Diego Daily Union, January 24, 1874.

35. Tucson Citizen, February 7, 1874. Mr. Haines mentioned in his final report (January 20, 1874, OQMG:TG) that sand storms had undermined the poles west of Yuma shortly after they were installed. The article in the Citizen mentioned that the repair crew had to "tripod" the poles to compensate for the shifting sand. Dr. Woodward, in his MS on the Military Telegraph, explains that a similar method was employed in the construction of the telegraph in Alaska to correct the problem encountered in erecting poles in perma frost.

36. See Map, Appendix A. Testing for breaks in the line was usually done without instruments. Ranchers who acted as repairmen for the overland telegraph had a simple apparatus whereby they could "break"

Destruction of telegraph line by human negligence reached such a point that Delegate McCormick was prompted to introduce a bill in Congress designed to protect the lines by imposing stiff penalties on offenders. The bill, passed the 23rd of June, 1874, provided that those convicted of "malicious injury" or destruction of government-owned telegraph property could be fined from one hundred to one thousand dollars or imprisoned up to three years, or fined and imprisoned as stipulated.³⁷ Unfortunately the law could not be imposed on animals, who also lent their limited talents toward destruction of the line. Cattle were oblivious to the impending hazard of a low line; sometimes they walked into the flimsy piece of iron, breaking and dragging it along the ground until replacement, not resplicing, was necessary. The pole also came under attack. Imagine the delight of a steer upon viewing a lone wooden pole in a desert void of any surface on which to rub his itching hide. At one place the telegraph poles became so popular as scratching posts that the wood was worn completely through, and down came the lines.³⁸

one side (direction) of the line and test the other by placing their finger on the wire; if they received a shock, the line was operating! If the line was broken the repairman still did not know the exact location of the break. The Wheatstone Bridge, developed in 1875, measured resistance over a given line and by calculations the point of a break in the line could be determined. For an account of the rancher's life as a repairman and his problems, see John W. Clampitt, Echoes from the Rocky Mountains (Chicago: American Mutual Library Assn., 1890), p. 65.

37. See Appendix I for wording of the act.

38. San Diego Daily Union, July 30, 1873.

The accomplishments of the Arizona military telegraph did not free it from criticism, and in fact the matter of faulty construction received substantial nationwide attention. In April of 1875, an article, copied from the New York Sun, was printed in the Journal of the Telegraph which cast a considerable cloud over claims of military efficiency in constructing the line.³⁹ The basis of the article was an accusation that construction of the telegraph had been accomplished with inferior materials, poles being unsatisfactory and the wire second-hand. The author of the article in the Sun also accused the Signal Service, which it believed was responsible for the construction, with wastefulness through purchase of an excess of material.⁴⁰ Captain Price's report was cited as a source of information.

Few people in the West would have had an occasion to read the article in the Sun, but the Journal of the Telegraph was a professional magazine widely read throughout the nation. One person who saw the article was R. R. Haines, and he must have felt both a great personal and professional injustice. He quickly prepared a rebuttal and solicited support from among his colleagues. The counter movement, however, was not against the Journal or the Sun but against Captain Price. Haines wrote to George S. Ladd, president of the Electrical Construction and

39. Haines to Ladd, May 15, 1875, OQMG:TG.

40. Ibid.

Maintenance Company, outlining his rebuttal; it was basically a defense of the economy measures regarding the purchase of poles, and a counter-charge that the statement regarding the wire was false. In so many words, Haines then accused Price of a breach in integrity and even referred later to the alleged statements of the captain as the "Price libel".⁴¹

Ladd was more than professionally interested in the subject for his company had contracted with the Army to provide the wire, insulators, tools and certain instruments. He in turn solicited aid from quarters that were to counter directly the published charges. From Lieutenant Smith he received a professional assessment that not only vindicated Ladd's firm but labeled his material "first class in every respect."⁴² The wire was judged by Smith to be the best quality of black wire ever to come under his personal observation. He supported his claim by mentioning one instance where the wire spanned a canyon near Wickenburg for a distance of 300 yards. Smith also mentioned the great distances over which lines were "worked" without the use of repeaters. In one case, Smith stated, the operator in San Francisco communicated with Prescott using only two repeaters, Vaisalia and Maricopa. This, Smith

41. Haines to Ladd, July 19, 1875, OQMG:TG.

42. Smith to Ladd, September 3, 1875, OQMG:TG.

claimed, was a remarkable feat, and he doubted whether such distances could have been "worked" without repeaters in other parts of the country.⁴³ Smith forwarded this reply, along with Ladd's letter, to the Chief Signal Officer for official perusal. Ladd also obtained a sworn affidavit from Joshua Gray, general superintendent of the wire mills of Pacific Wire Manufacturing Company, attesting that the wire supplied to the Army was of "Best Best" grade and coupled with Britannia joints.⁴⁴ The case against Captain Price was becoming substantial.

Colonel Eddy was also apprised of the published charges, and he too felt a personal injustice since it was his duty to procure the items implicated. Eddy took a most unusual course of action. He assembled the correspondence and prepared his own letter of rebuttal, using the other letters as annexes to support his charge that Captain Price had made erroneous statements.⁴⁵ This correspondence was then addressed to General Meigs for official scrutiny; but for Eddy this was not enough.

43. Ibid.

44. Sworn affidavit of Gray, October 12, 1875, OQMG:TG. The grade "Best Best" was not the highest quality available; at least two grades of wire were above "Best Best". Britannia joints were considered to be one of the most secure means of linking sections of wire. This method is described in Terrell Croft, American Electricians' Handbook (5th ed. rev.; New York: McGraw-Hill Book Co., 1942), pp. 251-258.

45. Eddy to Meigs, November 23, 1875, OQMG:TG. At first, Eddy's letter charged that the statements of Price were "untrue" but later softened the remark by crossing out the word and inserting "erroneous" in its place.

Desiring professional satisfaction, he had the correspondence printed in numerous copies and distributed. Captain Price, however, was not one of the addressees; he later received a copy through the courtesy of a friend. It was Price who now felt unjustly criticized.

Captain Price considered his best recourse was also to write to General Meigs. In January of 1876 he penned a lengthy letter to the Quartermaster General and included numerous letters, telegrams, and reports to support his position.⁴⁶ Expressing surprise at the course taken by Colonel Eddy, Price suggested that the colonel's actions were in violation of Army regulations.⁴⁷ The actions of Haines and Ladd comprised "a case of moral cowardice," and Haines' attempts at "undignified sarcasms"⁴⁸ were an expression of his enmity toward Price's social and official position. Throughout the letter Price maintained his

46. Price to Meigs, January 15, 1876, OQMG:TG.

47. Ibid. Price referred to paragraph 220 of the Revised Army Regulations of 1863 which read:

Deliberations or discussions among any class of military men, having the object of conveying praise, or censure, or any mark of approbation toward their superiors or others in the military service; and all publications relative to transactions between officers of a private or personal nature, whether newspaper, pamphlet, or handbill, are strictly prohibited.

U. S. Army, Revised United States Army Regulations (Washington: 1863).

48. Ibid.

innocence of releasing any information to the press, and insisted that he had been grossly misinterpreted. He realized that he was on the defensive, but rather than make excuses he emphasized his position regarding the wire and then added that the brackets for the insulators were also inferior. The wood screws provided with the brackets for connection to the insulators were too small, Price claimed, and the nail holes in the bracket for attachment to the poles were also too small.⁴⁹ Price also attacked the notion that the line could not have been built without the cooperation of Ladd's company. That firm was paid, and paid well, for its services, and any company would have been anxious to sell 630 miles of wire. In closing, Price requested that his letter and enclosures be filed with that of Colonel Eddy; and there the case came to an uncertain rest.

The time soon came when quarreling over the military telegraph was academic, for across the western horizon a new mode of communication was stretching its long arm into the Territory. The railroad was coming to Arizona. Shadowing the rails was an ubiquitous strand of wire for commercial telegraphy; and in that age of laissez-faire, competition between government and private enterprise was not the order of the day. Amid feeble protestations, the military lines succumbed to the cries of duplication. One by one, the military sections of the system were phased

49. Ibid.

out as soon as paralleled by a private network. By 1882 the military line between San Diego and Yuma was abandoned, and its serviceable material was subsequently used for repairs elsewhere and also to connect new and still isolated posts into the integrated system.⁵⁰ The Chief Signal Officer's annual report for that year disclosed that only 532 miles of military telegraph line were still in operation in Arizona, with the twenty-two stations manned by twenty-seven military and eleven civilians.⁵¹

The military line had served its joint purposes--aid to the Army and stimulation of civilian enterprise. As for public use, the privately-owned telegraph would do as well, though at greater expense to the customer. As for the problems of command, the telegraph never fully satisfied the needs of the Army. The telegraph was an effective device in maintaining control over reservation Indians, but once the natives were on the loose the Army had little use for its highly-touted umbilical cord of No. 10 wire. In the field, as it proved, commanders of troops required a mobile means of communication--an instrument that could be packed on muleback, set up anywhere, and yet provide instantaneous

50. Annual Report of General Hazen (1882), in, Report of the Secretary of War, 47th Cong. 2nd Sess., House Ex. Doc. 1 (Washington: 1883), p. 40, Serial No. 2096.

51. Ibid. The following sections were in operation:

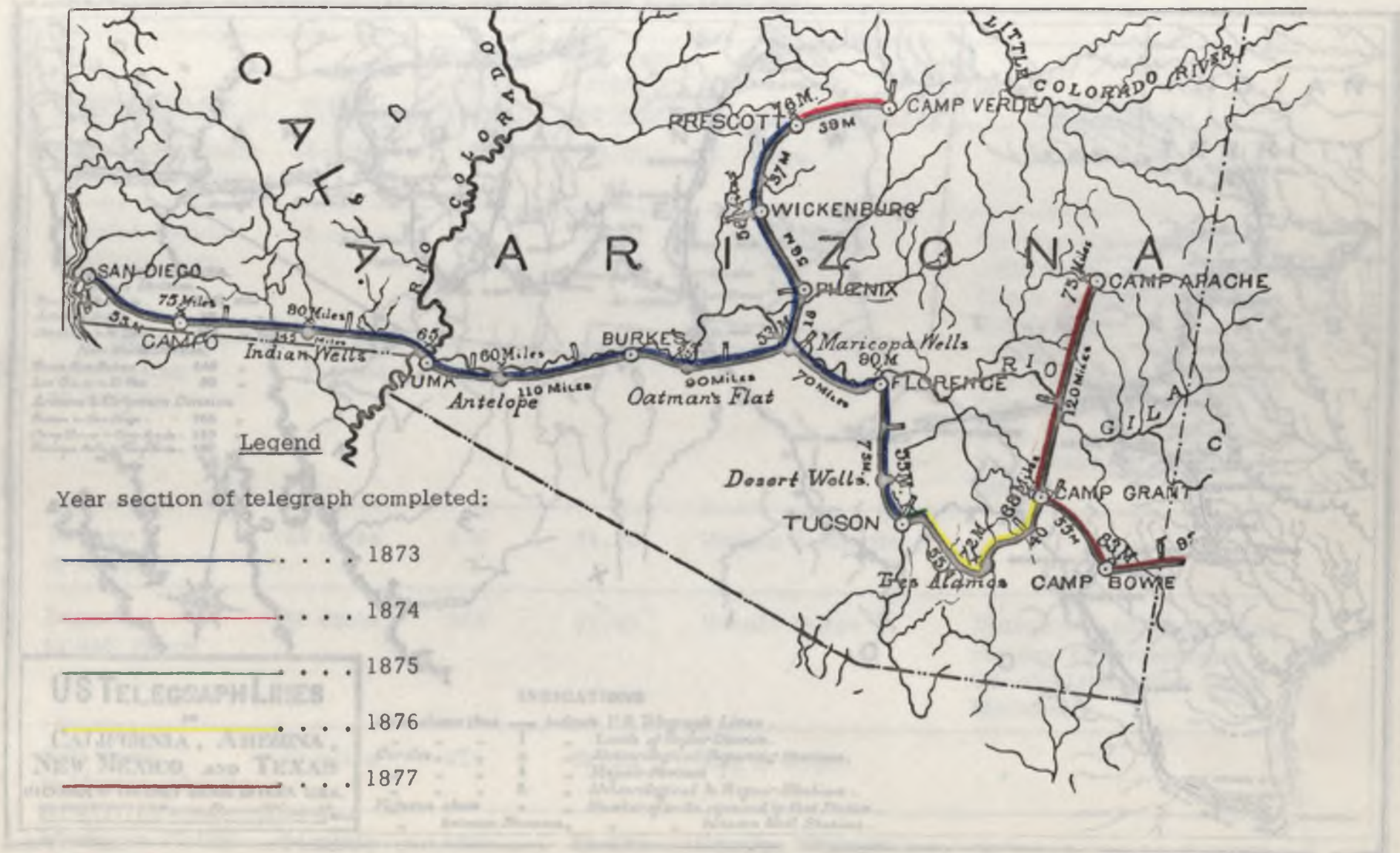
Silver City to Porters Station	76 miles
Camp Thomas to San Carlos Agency	35 miles
Fort Apache to Fort Bowie.	184 miles
Fort Verde to Maricopa	200 miles
Phoenix to Fort McDowell	27 miles
Tucson to Fort Lowell	10 miles

information. The answer came in the last campaign against Geronimo's Apaches in the summer of 1886--a relatively simple combination of sunlight, mirrors, and Morse code called the heliograph. This, of course, is another story.

APPENDICES

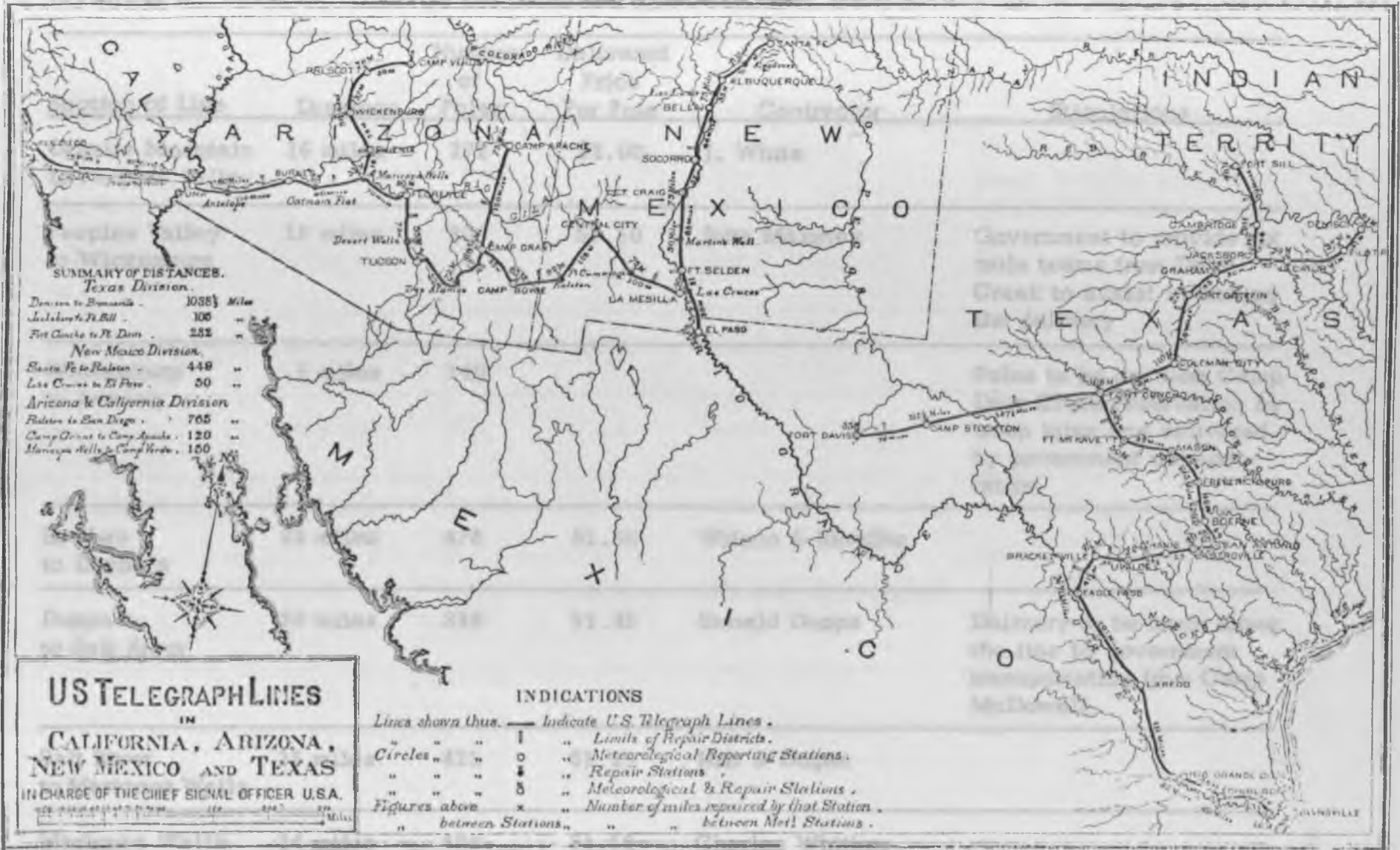
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APPENDIX A. MAP OF ARIZONA MILITARY TELEGRAPH AND MILITARY TELEGRAPH SYSTEM



APPENDIX B. MAP OF SOUTHWESTERN UNITED STATES AND MILITARY TELEGRAPH SYSTEM

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APPENDIX C. CONTRACTORS FOR THE TELEGRAPH IN ARIZONA

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Section of Line	Distance	Number of Poles	Delivered Price Per Pole	Contractor	Stipulations
Granite Mountain to Peeples Valley	16 miles	272	\$2.00	J. White	
Peeples Valley to Wickenburg	18 miles	306	\$1.50	John Maloney	Government to provide six mule teams from Date Creek to assist in making the delivery
Wickenburg to Lambey	8 miles	140			Poles to be cut from Camp Date Creek reservation by troop labor and delivered by government transportation
Lambey to Duppa's	28 miles	476	\$1.50	Wilson & Stouffer	
Duppa's to Salt River	20 miles	340	\$1.35	Donald Duppa	Delivery to be made along the line by government transportation from Camp McDowell
Salt River to Maricopa Wells	25 miles	425	\$1.25	Hill & Dugan	
Maricopa Wells to Sacaton	24 miles	408	\$1.50	Charles Whitlow	

APPENDIX C. (continued)

Section of Line	Distance	Number of Poles	Delivered Price Per Pole	Contractor	Stipulations
Sacaton to Picacho via Florence	46 miles	561	\$1.50	L. M. Stiles	13 miles provided by citizens; 33 miles furnished by the government
Picacho to Tucson	50 miles	850	\$1.50	Lee & Horn	Government to furnish transportation
Maricopa Wells to Gila Bend	40 miles	680	\$1.75	Charles Whitlow	
Gila Bend to Mission Camp	110 miles	1870	\$1.25	Decker & Bailey	
Mission Camp to Yuma	30 miles	570	\$1.25	Peter Bither	
Yuma to Bourke's Station	45 miles	550	\$1.50	Marcham & Johnson	

APPENDIX D. EXPENSE LEDGER OF CAPTAIN A. F. ROCKWELL

Statement of disbursements on account of the
 Arizona Military Telegraph Line, paid
 from the fund specially appropriated,
 for the construction and equipment thereof
 by Captain A. F. Rockwell. A. M. U. S. A.

Date	To whom paid	Amount	Remarks
1874			
Nov: 17	Markham & Johnson	550	Purchase of Poles
" 24	Peter Petrus	637 50	
" 28	John Early	78 33	Services as Electrician in the construction of the line.
" 28	S. C. Wright	148 14	Services as Repairer in the construction of line.
" 28	J. E. Atkinson	197 22	Services as Electrician in the construction of line.
Dec: 8	D. M. Kellogg	461 53	Services as Foreman.
1874			
January 5	William Woods	21 97	Wagon of horse in repair of the line.
" 5	W. E. Smith	61 53	Services in repair of the line.
" 5	W. L. States	810	Purchase of Poles
" 5	Lee & Horne	1291 50	
February 25	W. E. Smith	166 66	Services as Electrician in the construction of the line.
March 26	A. Foreman	36	Purchase of Poles for repair of line.
" 26	J. Sulchelder	19	Services in repair of line.
" 26	James Peck	5	Wagon of horse
" 26	W. L. States	10	Wagon of horse

APPENDIX D. (continued)

Date	To whom paid	Amount	Remarks
1874.			
March 26	John C. Cooper	41	Repair of line of haul road
" 20	James A. Moore	94 38	do
" 26	H. S. Hodges	12	do
" 26	M. M. Mott	40 94	Purchase of food for office of Chief Operator
" 26	L. O. Dowd	9	Repair of line in mending pole & replacing brackets etc
" 26	Geo. M. Williams	5	do
April 6	H. S. Hodges	5	do
" 11	Morris Goldswold	82	Repair of line near Phoenix
" 11	J. Goldswold & Co	40	Purchase of coils rope, travel, etc. & improvement, construction of guano line
May 12	J. H. Gould & Son	5 55	Equipment of Marine office
" 12	L. A. Sackell	5 50	Repair of lines
" 12	S. W. Swaner	36 54	of line
" 12	L. O. Dowd	13 45	Repair of line
" 13	W. A. Swan	16 85	do
" 20	James Peck	10 75	do
" 20	John S. Sather	14 50	do
" 20	Wm. S. Sather	16	do

Respectfully Submitted,
[Signature]
 Captain W. A. Swan

APPENDIX E. INITIAL STATIONS AND OPERATORS OF THE ARIZONA MILITARY TELEGRAPH

Station	Location	Agent	Pay	Remarks
San Diego	Western Union office	William E. Smith	\$50 per month	\$10 per month for rental space in the Western Union office
National City	Seven miles east of San Diego	William Hawkes	60% of receipts of his office	
Mountain Springs Repair Station	Eighty miles east of San Diego	C. O. McGrew	\$60 per month	Board and horse included by arrangement with the Station proprietor who received \$70 per month for the services furnished.
Yuma Depot	Quartermaster Bldg.	Thomas E. Atkinson	\$100 per month	Rations included.
Stanwix Repair Station	Station building	John T. Gifford	\$100 per month	Rations included. Office furnished by station keeper, King S. Woolsey
Maricopa Wells	Stage Station	C. W. Gearhart	\$100 per month	Rations included.
Phoenix	Goldwater's store	Morris Goldwater	60% of receipts of his office	Office and equipment furnished by Morris Goldwater.

APPENDIX E. (continued)

Station	Location	Agent	Pay	Remarks
Camp Whipple	Quartermaster office	W. B. Ellison	\$100 per month	Rations included.
Tucson	Quartermaster office	R. H. Howe	\$100 per month	Rations included.

APPENDIX F. INITIAL RATES OF THE ARIZONA MILITARY TELEGRAPH

(Per 10 Word Message)

Prescott to San Diego	\$1.50
to Yuma	1.25
to Tucson	1.25
to Florence	1.00
to Maricopa Wells	1.00
to Phoenix	1.00
to Wickenburg	.75

Wickenburg to San Diego	\$1.50
to Yuma	1.25
to Tucson	1.25
to Florence	1.00
to Maricopa Wells	1.00
to Phoenix	.75

Phoenix to San Diego	\$1.50
to Yuma	1.00
to Tucson	1.00
to Florence	.75

Florence to San Diego	\$1.25
to Yuma	1.00
to Tucson	.75

Tucson to San Diego	\$1.50
to Yuma	1.25

Yuma to San Diego	\$1.00
-------------------	--------

<u>Additional Words</u>	<u>Original Rate</u>	<u>Additional Charge</u>
For 5 words or	\$1.50	\$.75
fraction thereof	1.25	.50
	1.00	.50
	.75	.25

APPENDIX G. EXAMPLE, MONTHLY STATION REPORT OF THE ARIZONA MILITARY TELEGRAPH

Monthly Report of the cost of operating the Military

TELEGRAPH LINE, IN THE DEPARTMENT OF ARIZONA, FOR THE MONTH OF February, 1874, AT Stamm's STATION.

NUMBER	NAME OF OPERATOR	PAY PER MONTH	PAY PER DAY	NO. DAYS EMPLOYED	\$	CTS.	NATURE OF DUTIES
	<i>Joe Gifford</i>	<i>100 00</i>	<i>3.33 1/3</i>	<i>28</i>	<i>100.00</i>		<i>Manager H. S. Hill Telegraph line repair</i>

NUMBER	NAME OF ALL OTHER EMPLOYEES	PAY PER MONTH	PAY PER DAY	NO. DAYS EMPLOYED	\$	CTS.	NATURE OF DUTIES

TOTAL COST PER MONTH OF OPERATORS AND ALL OTHER EMPLOYEES					\$	CTS.	
TOTAL COST PER MONTH OF OPERATORS AND ALL OTHER EMPLOYEES					<i>100.00</i>		
COST OF REPAIRS AND OTHER EXPENSES DURING THE MONTH.					\$	CTS.	Nature of repairs or other necessary expenses.
Cost of labor in repairs to line	-	-	-	-	<i>10 00</i>		<i>Five poles down and work done</i>
Cost of materials used in repairs to line	-	-	-	-			<i>work done</i>
Cost of labor in repairs to offices	-	-	-	-			<i>work done</i>
Cost of materials used in repairs to offices	-	-	-	-			<i>work done</i>
Cost of labor in repairs to instruments or fixtures	-	-	-	-			<i>work done</i>
Cost of materials used in repairs to instruments or fixtures	-	-	-	-			<i>work done</i>
Cost of <i>Repairing Horse 19 days</i>	-	-	-	-	<i>19 00</i>		<i>put in track</i>
Cost of <i>Heat</i>	-	-	-	-	<i>10 00</i>		<i>kindling</i>
Cost of <i>Mail & Postage</i>	-	-	-	-	<i>2.30</i>		<i>filling post of new wire</i>
TOTAL COST OF REPAIRS AND OTHER EXPENSES DURING THE MONTH.					<i>41 50</i>		
TOTAL COST OF OPERATING THE LINE, INCLUDING ALL EXPENSES.					<i>\$ 141.50</i>		

Telegraph Station,
Stamm's, ARIZONA TERRITORY.
Month of February, 1874.
Joe Gifford
 Telegraph Operator in charge of office.

IN DUPLICATE.
 APPROVED BY COMMISSIONER OF THE ARIZONA MILITARY TELEGRAPH

APPENDIX I. ACTS OF CONGRESS RELATIVE TO THE ARIZONA MILITARY TELEGRAPH (EXTRACTED FROM U. S. STATUTES AT LARGE)

Forty-second Congress, Sess. III

. . . For the construction of a military telegraph from San Diego, California, via Fort Yuma and Maricopa Wells, to Prescott and Tucson, Arizona, fifty thousand three hundred and eleven dollars and eighty cents. . . .

Forty-third Congress, Sess. I

. . . That the Secretary of War be, and he is hereby, authorized to construct and operate a line of telegraph, beginning at or near the city of Denison, in Grayson county, Texas; thence by the nearest practicable route to Fort Sill, Indian Territory; thence to Fort Richardson, Texas; thence along the northern frontier line of settlements to Forts Griffin and Concho; thence to the Pecos River, at or near the mouth of Toyah Creek; thence to Fort Clarke, on Las Moras Creek; thence to Fort Duncan, on the Rio Grande; thence down the Rio Grande, via Fort McIntosh and Ringold's Barracks, to Brownsville, so as to connect the military posts which are now, or may hereafter be, established on said line with the military head-quarters of said district; and that the sum of one hundred thousand dollars, or so much thereof as may be necessary, be, and the same is hereby, appropriated out of any money in the treasury of the United States not otherwise appropriated. . . .

.
. . . To enable the Secretary of War to extend the line of military telegraph from Prescott to Camp Verde and Camp Apache in Arizona, four thousand dollars: Provided, That the Secretary of War be, and he is hereby, authorized to pay the expenses of operating and keeping in repair the telegraph-lines constructed and operated by the War Department in said Territory out of any moneys received for despatches sent over said lines; any balance remaining after the payment of such expenses to be covered into the Treasury as a miscellaneous receipt; the moneys received in any one fiscal year to be used only in payment for the expenses of that year. And a full report of the receipts and expenditures in connection with the said telegraph-lines shall be made quarterly to the Secretary of War through the Chief Signal-Officer. And the Chief Signal Officer shall have the charge and control of said lines of telegraph in the construction repair and operation of the same. . . .

APPENDIX I. (continued)

. . . That any person or persons who shall wilfully or maliciously injure or destroy any of the works or property or material of any telegraphic line constructed and owned, or in process of construction, by the United States, or that may be hereafter constructed and owned or occupied and controlled by the United States, or who shall wilfully or maliciously interfere in any way with the working or use of any such telegraphic line, or who shall wilfully or maliciously obstruct, hinder, or delay the transmission of any communication over any such telegraphic line, shall be deemed guilty of a misdemeanor, and, on conviction thereof in any district court of the United States having jurisdiction of the same, shall be punished by a fine of not less than one hundred nor more than one thousand dollars, or with imprisonment for a term not exceeding three years, or with both, in the discretion of the court. . . .

Forty-third Congress, Sess. II

. . . For completing the construction, and for maintenance and use of military telegraph lines on the Indian and Mexican frontiers, and for the connection of military posts and stations, for the better protection of immigration and the frontier settlements from depredations, especially in the State of Texas, the Territories of New Mexico and Arizona, and the Indian Territory, eighty-eight thousand dollars: Provided, That the Secretary of War be, and he is hereby, authorized to pay the expenses of operating and keeping in repair the said telegraph lines out of any money received for dispatches sent over said lines; any balance remaining after the payment of such expenses to be covered into the Treasury as a miscellaneous receipt; the money received in any one fiscal year to be used only in payment for the expenses of that year. And a full report of the receipts and expenditures in connection with the said telegraph lines shall be made quarterly to the Secretary of War through the Chief Signal Officer. And the Chief Signal Officer shall have the charge and control of said lines of telegraph in the construction, repair, and operation of the same. And so much of this appropriation as may be necessary, not to exceed thirty thousand dollars in all, shall be used in constructing a telegraph line from Fort Marcy to Fort Bayard, in New Mexico, and from Fort Bayard to Camp Grant, in Arizona. . . .

Forty-fourth Congress, Sess. I

. . . For completing the construction, maintenance, and use of military telegraph lines on Indian and Mexican frontiers, and for the connection of military posts and stations, for the better protection of immigration and the frontier settlements from depredations, especially in the State of Texas, the Territories of New Mexico and Arizona and the Indian Territory, under the provisions of the act approved March third, eighteen hundred and seventy-five, forty-five thousand dollars. . . .

APPENDIX I. (continued)

. . . Construction, maintenance and repair of military telegraph lines: For the construction and continuing the construction, maintenance and use of military telegraph lines on the Indian and Mexican frontiers for the connection of military posts and stations and for the better protection of immigration and the frontier settlements from depredations, especially in the State of Texas and the Territories of New Mexico and Arizona and the Indian Territory, under the provisions of the act approved March third, eighteen hundred and seventy-five, twenty-two thousand five hundred dollars.

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APPENDIX J.
MAP OF SOUTHWEST ARIZONA, 1875

Compiled under the authority of Maj. Gen. J. M. SCHOFIELD
Commanding Mil. Div. of the Pacific
By 1st Lieut. J. C. MALLERY Corps of Engrs



Sheet No. 3.

DEPARTMENT of ARIZONA.

REVISED, 1875.

Published by authority of
THE HON. THE SECRETARY OF WAR
in the Office of the CHIEF OF ENGINEERS U.S. Army
Washington, D.C. 1876



Drawn by J. W. Ward.

Scale of Miles

Author—Lieut. Col. H. S. Williams, Eng. Corps 1860-7. Maj. H. H. Robert,
Eng. Corps 1867-71. Lieut. Col. W. H. Wood, Eng. Corps 1867-71. Capt.
Geo. J. Price, 1871-75. Rev. J. C. Mallery, 1875-76.
Map 1869, 1. I. Locking 1869. Public Survey
Survey to date

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SOUTHEAST ARIZONA, 1875

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Scale of Miles
Authorities: Maj. G. B. Baker, Top. Corps, 1867; Lt. Col. W. H. Fisher, Top. Corps, 1868; Lt. Col. G. B. Cooper, Top. Corps, 1869; Lt. Col. J. M. Schouler, Top. Corps, 1870; Lt. Col. J. M. Schouler, Top. Corps, 1871; Lt. Col. J. M. Schouler, Top. Corps, 1872; Lt. Col. J. M. Schouler, Top. Corps, 1873; Lt. Col. J. M. Schouler, Top. Corps, 1874; Lt. Col. J. M. Schouler, Top. Corps, 1875; Lt. Col. J. M. Schouler, Top. Corps, 1876; Lt. Col. J. M. Schouler, Top. Corps, 1877; Lt. Col. J. M. Schouler, Top. Corps, 1878; Lt. Col. J. M. Schouler, Top. Corps, 1879; Lt. Col. J. M. Schouler, Top. Corps, 1880; Lt. Col. J. M. Schouler, Top. Corps, 1881; Lt. Col. J. M. Schouler, Top. Corps, 1882; Lt. Col. J. M. Schouler, Top. Corps, 1883; Lt. Col. J. M. Schouler, Top. Corps, 1884; Lt. Col. J. M. Schouler, Top. Corps, 1885; Lt. Col. J. M. Schouler, Top. Corps, 1886; Lt. Col. J. M. Schouler, Top. Corps, 1887; Lt. Col. J. M. Schouler, Top. Corps, 1888; Lt. Col. J. M. Schouler, Top. Corps, 1889; Lt. Col. J. M. Schouler, Top. Corps, 1890; Lt. Col. J. M. Schouler, Top. Corps, 1891; Lt. Col. J. M. Schouler, Top. Corps, 1892; Lt. Col. J. M. Schouler, Top. Corps, 1893; Lt. Col. J. M. Schouler, Top. Corps, 1894; Lt. Col. J. M. Schouler, Top. Corps, 1895; Lt. Col. J. M. Schouler, Top. Corps, 1896; Lt. Col. J. M. Schouler, Top. Corps, 1897; Lt. Col. J. M. Schouler, Top. Corps, 1898; Lt. Col. J. M. Schouler, Top. Corps, 1899; Lt. Col. J. M. Schouler, Top. Corps, 1900.