

# Exhibit 7

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WAR DEPARTMENT,  
SURGEON-GENERAL'S OFFICE,

WASHINGTON, MAY 1, 1875.

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A REPORT

ON THE

HYGIENE OF THE UNITED STATES ARMY,

WITH

DESCRIPTIONS OF MILITARY POSTS.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1875.

## CAMP McDOWELL, ARIZONA TERRITORY.

INFORMATION FURNISHED BY ASSISTANT SURGEONS CHARLES SMART AND C. DEWITT, AND ACTING ASSISTANT SURGEON JAMES REAGLES, UNITED STATES ARMY.

This post is situated on the west bank of the Rio Verde, about eight miles above its junction with the Salt River, in latitude  $33^{\circ} 40'$  north, and longitude  $34^{\circ} 37'$  west, at an elevation of 1,800 feet above the sea-level. It is forty-five miles north of the Maricopa and Pimo villages, and the same distance southwest of Camp Reno. It is reached by steamer from San Francisco to San Diego, Cal., thence by mail stage via Yuma and to Maricopa Wells, from which place a weekly mail is carried north to the post. The Indians have seldom interfered with this mail-route, but the rising of the Colorado in Southern California frequently delays the transmission of the mails, and the floods of the Gila and Salt River have cut the post off from communication with the outside world for three and four weeks at a time. Letters usually reach San Francisco in fifteen days, and Washington, by the eastern route, in twenty-five days. This part of the Rio Verde basin is surrounded by mountains: the high line of the Mazatsal peaks on the east, twenty miles distant; a lower range, to which no name has been applied, fifteen miles distant on the west; the numerous low peaks from which the river issues on the north, and the grotesquely abrupt mountains of the Salt River country on the south. On both sides of the Verde, near the post, the mesa rises almost from the water's edge, becoming more and more broken by deep and narrow ravines, until it blends with the foot-hills of the mountain-ranges on the east and west. The river is thus well confined, and its bottom-lands free from marshes. The strip of easily irrigated bottom-land is very narrow, yet much good soil could be reclaimed by irrigation from large acequias. Cottonwood, willow, and alder grow along its banks, tangled frequently by grape-vines, which yield a small acid fruit. Mesquite, ironwood, palo-verde, artemisia, and species of *opuntia* and *cereus* cover the mesa, in some parts even rendering it impassable; the more open parts furnish indifferent grazing. Scrub and live oak and pine of large growth are found on the Mazatsal, but the building-timber is almost all in inaccessible situations. Quail and rabbits are abundant on the mesa, and deer are found in the mountains, but less frequently than in the more northern portion of the Territory. Coyotes, rattlesnakes, scorpions, lizards, centipedes, and tarantulas are to be met with here as in other parts. The soil is dry and porous, and well drained by its decided slope toward the ravines.

The post was established in 1865, by five companies of California volunteers, as a point from which to operate against, or treat with, the Indians of the neighboring mountains. The reservation taken up measured, from the center of the parade-ground, three miles north and south and two miles east and west. This included the greater part of the arable land in the immediate neighborhood. Building was immediately commenced and continued until early in 1866, when the essential part of the post was finished. One hundred and fifty acres of the bottom-land were then cleared for cultivation, water being brought to it by an acequia from a point four miles up the river.

The climate is warm and dry. Although the thermometer in the day-time in summer may show a high degree of heat, the nights are commonly not oppressive. Thunder-clouds from the mountains drop a heavy passing shower once or twice a month. In winter the rains are lighter, though of much longer duration. Snow falls on the mountains, but not on the mesa. The winds are variable and light, except when immediately preceding a thunder-storm.

The post as planned and built in 1865 consisted of a parade-ground, 525 by 435 feet, with its center one-third of a mile from the margin of the river, and 50 feet higher than its level. This height, attained by gradual rise of the ground, gives, with the aid of some shallow trenching, a very efficient surface-drainage. The buildings were arranged along the sides of the parade-ground as follows: On the west and farthest from the river the quarters of the commanding officer, a comparatively large square building, with a hall and two rooms on either side. On the south a line of quarters for officers; four houses facing the parade, each divided into four rather small rooms.

A kitchen was afterward attached to the rear of each of these buildings. On the north, immediately opposite the officers' quarters, four sets of company barracks, with their gables toward the parade, each 187 by 24 feet, divided by transverse partitions into two dormitories and four smaller rooms, for use respectively as kitchen, mess-hall, office, and store-room for company property. The hospital was placed on the west, and the quartermaster's store, bakery, and sutler's store on the east of this column of barrack buildings, and separated from them by broad streets. On the east the guard-house, ordnance storehouse, and house for the preservation of fresh meat for issue. Outside of these lines of buildings were the corrals, of high, close-set upright posts, on the southeast, and the laundresses' quarters, of primitive-looking adobe huts, on the north. The sinks, still farther north, were deep trenches, inclosed by a thick wall of willow and cottonwood branches. At its establishment this post was intended to be the largest and most solidly built in the Territory. For ornaments and future shade a line of cottonwood saplings were planted at short intervals along the sides of the parade-ground, and were watered assiduously for two years, during which time they flourished and promised well, but after this they showed signs of decline, in spite of the attention paid to them, and so came to be neglected. All the buildings were of adobe, with earthen floors, mud roofs, and open fire-places. The roofs were flat, and had mud, sand, and lime cement laid over *seguara* ribs, which in turn were supported by cottonwood timbers. These timbers, or *vigas*, raised the roof from 8 to 10 inches above the wall, and so left ample space for ventilation. But, however carefully built by the California troops, the buildings proved unequal to the heavy washing showers of the summer, and the penetrating rains of the winter months. The roofs leaked almost from their first exposure, and the walls cracked and washed away in place after place, until, in spite of constant repairs, many of the houses became almost untenable.

The present company quarters consist of two adobe buildings, each 150 by 20 feet, with a wing, 12 by 65 feet, extending across one end, and reaching, 45 feet, to the rear of the building, and another, 12 by 45 feet, extending from the rear of the other end of the building. These buildings are used as dormitories, company offices, store-rooms, shops, &c. The dormitories are each lighted by twenty windows, warmed by stoves and fire-places, are well ventilated, and afford an air-space of 900 cubic feet per man of average occupancy. They are furnished with iron bunks and the usual fixtures, and are very comfortable. In rear of each barrack is an adobe building, 15 by 50 feet, for a mess-room, having an addition adjoining the rear, 15 by 21 feet, for a kitchen. The walls of all these buildings are 12 feet high, and the roofs are shingled. One set of these quarters is located near the east end of the south line of the post; the other set is at the southeast angle, and extends along the east line.

Married soldiers' quarters are adobe huts, covered and surrounded with brush. They are located some distance to the east of the men's quarters. They are the miserable tumble-down hovels that were constructed when the post was first established, and are unfit to live in.

Officers' quarters comprise ten sets: the commanding officer's house on the west of the parade, mentioned above, and nine sets on the south line, built in 1872 and 1873. They are adobe structures, with shingle roofs, are plastered and in good condition.

A building originally erected for and occupied as headquarters District of Arizona, situated half-way between the post and the river, and nearly on a line with the north side of the parade, is used as officers' quarters. It is built after the plan of the commanding officer's quarters.

The guard-house consists of a guard-room and a prison-room; the former, 16 by 28 feet; the latter, 30 by 28 feet. It is well ventilated, is warmed by fire-places, but the dirt roof is in a leaky condition, making it very uncomfortable.

The storehouses are three good adobe buildings erected in 1872.

A new bakery was erected in 1872. It is an adobe structure with shingle roof, and contains two brick ovens in good order.

The hospital, recently completed, is shingle-roofed, surrounded by a veranda, and is well adapted to its purpose. The principal ward is 33 by 12 feet, 12 feet in height. It contains eight beds, affording an air-space of 594 cubic feet to each. The office and dispensary are in one room. The kitchen and mess-room are convenient. The rear veranda is used as a lavatory; there is a small store-room, and an attic, which is used for storing surplus articles.

The post garden furnishes a liberal supply of fresh vegetables.

The water-supply has been wagoned in barrels from the Rio Verde since the post was established. It is of excellent quality. An attempt was made to sink a well on the parade-ground, but no water was struck. Cases of malarial disease did not occur among the troops until scouting commenced, and the command exposed in malarious districts.

Although the Rio Verde contains an abundance of fish, they are soft and flavorless.

The cemetery is distant about a quarter of a mile northwest from the buildings. It measures 75 by 60 feet, is surrounded by a temporary fence, and contains the graves of twenty-six soldiers and seven citizens.

The means of subduing fire are buckets and barrels, kept constantly filled.

*Meteorological report, Camp McDowell, Ariz., 1870-'74.*

Month.	1870-'71.				1871-'72.				1872-'73.				1873-'74.			
	Temperature.			Rain-fall in inches.												
	Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.	
July	90.21	109	74	0.90	93.19	108	74	0.16	86.38	107*	62*	0.16	84.98	113*	72*	0.0
August	89.49	104	71	1.9*	91.41	107	76	2.03	83.49	101*	66*	7.17	83.31	108*	65*	0.0
September	83.35	104	65	0.22	85.76	104	72	0.20	77.60	96*	51*	0.05	84.96	106*	54*	0.0
October	73.02	101	53	0.40	73.44	101	55	0.00	69.17	98*	30*	0.00	71.48	108*	33*	0.0
November	62.01	85	44	0.00	58.79	86	37	1.24	53.72	85*	17*	0.00	64.20	99	30	0.0
December	47.54	74	25	0.00	52.17	75	32	0.20	53.02	80*	21*	1.56	52.96	83	27	0.0
January	51.22	75	30	0.25	46.00	90*	24*	0.50	50.57	83*	16*	0.00	52.03	83	27	0.0
February	52.74	71	34	0.40	53.22	82*	31*	0.40	50.10	80*	20*	1.60	51.62	78	28	0.0
March	59.38	79	40	0.00	60.77	83*	32*	0.00	61.72	85*	30*	0.00	57.55	79	28	0.0
April	67.76	92	48	0.40	64.37	94*	32*	0.33	64.06	100	29*	0.00	63.22	97	40	0.0
May	83.92	102	70	0.00	77.31	103*	49*	0.30	76.44	101	45*	0.16	78.50	105	47	0.0
June	91.46	107	69	0.00	87.24	107*	56*	0.31	88.69	113*	49*	0.00	89.71	114	57	0.0
For the year	70.95	109	55	4.54	70.33	108	24*	5.88	67.91	113*	16*	20.63	71.11	114	37	0.0

\* These observations are made with self-registering thermometers. The mean is from the standard thermometer.

*Consolidated sick-report, Camp McDowell, Ariz., 1870-'74.*

Year	1870-'71.		1871-'72.		1872-'73.		1873-'74.	
	Officers	Enlisted men						
Mean strength	5	147	10	291	6	219	1	111
Diseases.								
GENERAL DISEASES, A.								
Typhoid fever	1		2					
Typho-malarial fever					1			
Remittent fever			2					
Intermittent fever	93		36		68			
Other diseases of this group			11		2			
GENERAL DISEASES, B.								
Rheumatism	17		11		13		3	
Syphilis	5		12		19		4	
Consumption			1		1		1	
Other diseases of this group					1			
LOCAL DISEASES.								
Catarrh and bronchitis	35		29		11		5	
Pneumonia			1					
Plenty			3					
Diarrhea and dysentery	69	1	101	2	34		3	
Hernia	1							
Gonorrhoea	3		2		1		4	
Other local diseases	88		96	3	97	1	4	
Alcoholism					11		1	
Total disease	320	1	309	7	228	2	78	
VIOLENT DISEASES AND DEATHS.								
Gunshot wounds	3		2		1			
Arrow wounds	1							
Other accidents and injuries	78		77		83		30	
Homicide							1	
Total violence	82		79		84		31	

## CAMP MOJAVE, ARIZONA TERRITORY.

REPORT OF ACTING ASSISTANT SURGEONS F. S. STIRLING AND JAMES B. LAURENCE, UNITED STATES ARMY.

This camp is situated on a gravel bluff on the east bank of the Colorado River, near the head of Mojave Valley; latitude,  $35^{\circ} 6'$  north; longitude,  $37^{\circ} 28'$  west; altitude, 600 feet above sea-level, and 75 feet above the river. It was established in 1858 for the protection of emigration over the Southern Overland Route to California, the Mojave and other Indian tribes being then hostile, and having in the summer of 1857 committed depredations on parties of emigrants. The Indians remained hostile until severely defeated by the troops under Major Armistead, who encountered them in the valley below the fort and drove them back with great loss. They then sued for peace.

The Indians now occupying this region of country number about two thousand five hundred souls; they have never lived on a reservation, are peaceful, and, strange to say, industrious, cultivating the low lands bordering the river. Pumpkins, watermelons, corn, and wheat are the chief products of the Indian gardens.

The post was abandoned in May, 1861, and re-garrisoned in May, 1863, by two companies of the Fourth Regiment California Volunteer Infantry.

The plateau extends north and south about forty miles, with an average width of ten or twelve miles. There are two reservations, each three miles square. The camp is built on the upper one. The lower reservation is on the low bottom-land, about six miles south of the post. Part of it is subject to overflow; the soil is fertile, and is covered with coarse grass, cottonwood and mesquite trees, with a dense undergrowth of willows and arrow-weed. With this exception the country is a waste. The elevated plains are covered sparsely with a growth of greasewood bush, interspersed with varieties of the cactus family.

Rabbits and quails are found in large numbers; ducks and geese abound in the sloughs, and the river affords an abundance of fish of the salmon species. Deer, mountain-sheep, and antelope are found in the hills. The mountains, on either side of the river, are barren and destitute of timber. But few springs of water are found in the adjacent mountains, and the country may be described as a sterile plain, broken by arroyos or dry gulches.

The climate is healthy, the winters pleasant, but the summers extremely hot. There is no rainy season, though thunder-showers are frequent in July and August. The annual rise of the Colorado takes place in June. The prevailing winds in the summer are from the south, and passing over the arid plains, the air is so heated that it scorches like that from an oven. The nights are as hot as the days, the temperature not varying in the slightest degree for hours—so hot that no one can sleep in a house, the whole garrison lying on the open plain, endeavoring to catch the faintest breeze, the walls of the houses becoming so heated as to render the barracks unendurable.

The post buildings consist of one-story adobe structures, arranged on the sides of a rectangular parade situated on a level plain.

The barracks consist of two buildings located on the north side of the parade, one having a shingle roof, the other a dirt one, both having dirt floors. Each building is 90 by 35 by 16 feet, is well ventilated by openings under the eaves, and by windows and doors. The building with shingle roof is occupied as a dormitory. It is warmed by two open fire-places and two stoves, affords about nine hundred cubic feet of air-space per man, for average occupancy, and is very comfortable. It is furnished with iron single bedsteads.

Kitchen and mess-room are in a building situated a few feet from the barrack. This building is 80 by 35 feet, and was originally intended for two companies. It was floored in 1874. The barrack-office and store-room are in the western end of the barrack. They were floored in 1874, and

are commodious and comfortable. A small root-house, in rear of the mess-rooms, answers its purpose admirably.

Married soldiers' quarters are comfortable adobe buildings, situated from two to four hundred yards north of the parade. These buildings were erected and formerly occupied by citizens, and formed part of the town of Mojave City.

Officers' quarters, situated on the south side of the parade, comprise two adobe buildings, well finished, roomy, and comfortable. One of these, occupied by the commanding officer, was built in 1873, is 51 by 15 feet, divided into three rooms; the other is an adobe set, divided by an adobe partition, having three rooms on each side. Each room in these buildings is 14 feet in height, is ceiled and floored, has two doors and four windows, and is provided with an open fire-place. A comfortable stockade building, containing four rooms, each 16 by 12 feet, floored, ceiled with canvas, and dirt-roofed, is also used by officers as quarters.

The guard-house is on the east side of the parade, is 20 by 35 feet, 12-foot walls, containing a guard-room, 20 by 20 feet, and two cells, each 10 by 15 feet. It is well ventilated by openings at the eaves, by windows, and an open fire-place.

The post bakery, on the north side of the parade, is in very good repair, and has a capacity of one hundred and twenty rations.

Storehouses are two fine and abundantly capacious buildings, shingle-roofed, well ventilated, and in good repair, situated, one on the east, the other on the north side of parade. The one on the east side was erected in 1873, and is 85 by 35 feet.

The hospital was completed in 1873, is in excellent condition, and well adapted for its purpose. It is located about two hundred yards north of the barracks, and faces south. It is built of adobes, is floored and ceiled, has a shingle roof, with a ventilator at the ridge the whole length of the building. A porch, 10 feet wide, surrounds the entire building. Commencing at the west end, there is a ward, 40 by 20 feet, having a capacity for eight beds, giving to each an air-space of 1,200 cubic feet; next to the ward is a hall, 5 feet wide, running across the building; then, an isolation ward, 10 by 20 feet; adjoining this is a store-room, 9 by 20 feet; and at the east end of the building, a dispensary, 10 by 20 feet. The rooms are all 12 feet high in the clear. There are seven large windows and two doors in the large ward; the isolation ward has two large windows and two doors, and the dispensary has four large windows and two doors. Immediately in rear of the main building, and thirty-five feet distant, is the building containing the kitchen and mess-hall. The walls are adobe, 18 inches thick and 12 feet high. The kitchen is 15 by 17 feet; the mess-hall, 15 by 12 feet. These rooms are floored with boards, but are not ceiled. The building is shingle-roofed, is well lighted and ventilated, and well furnished with fixtures and furniture. The dead-house is situated directly west of the main building, one hundred and sixty feet distant from it, is built of adobes, has a shingle roof, and is 10 feet square, inside measurement. The walls are 10 feet high. Water is introduced into the dead-house, which is also used as a bath-room. This building has two large windows and one door. To the left of the mess-hall, and forty-five feet distant, is the sink, an adobe structure, 13 by 6 feet, with walls 10 feet high, and a shingle roof. It is built over a pit, 15 feet deep, and has a ventilating shaft extending four feet above the roof. There is a hydrant between the main building and the kitchen. The dead-house contains an excellent shower-bath and conveniences for bathing. Shade-trees were set out in 1874 on the east and south sides of the hospital; they are in a thriving condition, and already add greatly to the comfort and appearance of the hospital grounds.

The stables are frame buildings, open at the sides, shingle-roofed, with stalls for fifty-two animals, and situated in a corral with high adobe walls. All are nearly new and in fine condition.

The post is bountifully supplied with water from the Colorado River, by means of a six-horse-power steam-engine. The water is pumped into a tank capable of holding six thousand gallons, from which it is conducted by pipes to all parts of the post.

The post being situated so near to, and from sixty to seventy-five feet above the river, on a gravelly bluff, the drainage is naturally perfect.

The sinks for the men are trenches covered by frame buildings, situated in a ravine; those for the officers are deep pits covered by adobe buildings.

There is no post garden; few vegetables can be obtained in the vicinity of the post, and these

are held at too exorbitant rates for purchase. The troops have an abundance of potatoes, onions, cracked wheat, buckwheat, flour, &c., procured through the Subsistence Department from San Francisco, and paid for from the company fund.

The means of communication are by wagon or horseback, over fair and, at present, safe roads. There is also a steamer, monthly, from Fort Yuma, Cal., by means of which most of the supplies are brought to the post. The river is easily navigable from April to November; but during the remainder of the year with more or less difficulty, owing to sand-bars and shifting channels. There is a semi-weekly mail to and from San Francisco and the East, via Ehrenberg, brought from the latter place on horseback, and a weekly mail to and from Prescott, Ariz.

Meteorological report, Camp Mojave, Ariz., 1870-'74.

Month.	1870-'71.				1871-'72.				1872-'73.				1873-'74.			
	Temperature.			Rain-fall in inches.	Temperature.			Rain-fall in inches.	Temperature.			Rain-fall in inches.	Temperature.			Rain-fall in inches.
	Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.	
July	95.81	118	82	0.71	96.75	115	81	0.66	91.69	118*	61*	0.00	100.11	118*	47*	0.00
August	92.97	115	76	1.90	93.87	110	79	0.00	90.92	113*	68*	0.90	91.78	116*	52*	3.20
September	82.95	105	63	0.00	87.71	105	59	0.00	83.74	109*	55*	0.00	89.72	108*	45*	0.00
October	72.57	103	50	0.78	73.59	98	52	0.10	73.09	98*	37*	0.00	73.14	105*	27*	0.00
November	63.77	83	42	0.00	58.57	81	36	0.00	55.45	81*	29*	0.00	66.21	89*	36*	0.50
December	49.57	72	29	0.27	53.27	73	34	0.03	51.45	75*	23*	0.10	51.97	67*	29*	2.80
January	55.96	78	34	0.00	50.34	75*	31*	0.00	74.70	78	28*	0.00	56.39	70*	27*	0.10
February	55.35	74	37	0.02	56.75	83*	33*	0.10	54.53	73*	14*	0.80	53.29	69*	29*	5.00
March	64.63	82	42	0.00	61.29*	85*	36*	0.00	69.64	92	41	0.10	62.09	80*	39*	0.20
April	68.79	96	47	4.05	66.15	92*	40*	0.20	72.29	99	49	0.10	72.22	96*	54*	0.10
May	81.41	105	62	0.00	80.53	110*	47*	0.00	78.27	102*	64	1.20	83.43	107*	63*	0.90
June	92.66	117	65	0.00	88.53	114*	59*	1.00	91.75	112*	39 (7)*	0.00	92.35	111*	75*	0.00
For the year.....	72.98	118	20	7.73	72.60	115	21*	2.09	72.29	113*	14*	3.20	74.56	118*	27*	13.40

\* These observations are made with self-registering thermometers. The mean is from the standard thermometer.

Consolidated sick-report, Camp Mojave, Ariz., 1870-'74.

Year	1870-'71.		1871-'72.		1872-'73.		1873-'74.	
Mean strength.....	{ Officers.....		{ Officers.....		{ Officers.....		{ Officers.....	
	{ Enlisted men.....		{ Enlisted men.....		{ Enlisted men.....		{ Enlisted men.....	
	3	73	2	46	2	26	2	44
Diseases.								
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
GENERAL DISEASES, A.								
Intermittent fever	17		4				1	
Other diseases of this group			1				3	
GENERAL DISEASES, B.								
Rheumatism	10		3		5		14	
Syphilis	18		17		11		15	
Consumption	2		1		2			
Other diseases of this group							4	
LOCAL DISEASES.								
Catarrh and bronchitis	8	1			6		3	
Pleurisy					1			
Diarrhoea and dysentery	20		3		7		10	
Gonorrhoea	2		2		1		4	
Other local diseases	54	3	19	1	18		30	
Alcoholism	12		5		1		1	
Total disease.....	143	4	55	1	52		85	
VIOLENT DISEASES AND DEATHS.								
Gunshot wounds	1	1	1					
Drowning					1			
Other accidents and injuries	56		6		6		11	
Total violence.....	57	1	7	1	6		11	

## RIO VERDE INDIAN RESERVATION, ARIZONA TERRITORY.

REPORT OF ACTING ASSISTANT SURGEON WILLIAM H. CORBUSIER, UNITED STATES ARMY.

This is a temporary camp at the Rio Verde Indian agency; situated two and one-half miles west of the Rio Verde and sixteen miles north of Camp Verde. It is located on a small stream, which comes out of the rocks about one hundred and fifty yards west of the camp, and is a continuation of a stream which comes down the mountains, sinks in a cañon about two and one-half miles west of this place, runs through limestone, and makes its appearance again near the camp. The water has lime in solution, and is warmer at its place of exit than it is below, and has received from the Indians the name *Hok-e-roo-ya*, (hot water.) All the water for the use of the post is taken from this stream.

Since the commencement of the year 1874, from fifteen to thirty men of Company K, Fifth Cavalry, and from thirty to one hundred and twenty Indian scouts, under Second Lieut. W. S. Schuyler, Fifth Cavalry, have been stationed here. At this time (December 31, 1874,) there are eighteen soldiers and forty scouts at the post. The soldiers have occasionally been changed, but the detail has always been from Company K.

Until the 2d of June last the camp was near the Rio Verde, and the men suffered very much from intermittent fever. The Indian agency being there the troops could not leave, and the agent could not be prevailed upon to move. In June, Lieutenant Schuyler took charge of the agency, and immediately moved out of the river-bottom to the present location, at the foot of the mountains, 300 feet higher than the river.

There are about one thousand five hundred Indians on the reservation, composed of Apache Yumas and Apache-Mojaves—two tribes, speaking two different languages. These Indians are under three head chiefs, and are divided into fourteen bands, under petty chiefs. The Apache-Yumas and Apache-Mojaves are tall, well-built men. The Apache-Tontos are short, but tough and wiry, and more able to endure hardships than the others. Scouts are selected from the Indians, and enlisted for six months. For a time they lived in shelter-tents, and were camped two hundred yards back of the soldiers; but they now live with their people in brush-shelters of their own make. Soldiers' clothing is issued to them. In general they are dirty in their habits, but are slowly improving.

Until December the men lived in old A-tents or in shelter-tents, but at that time they completed an adobe house, in which they now live altogether. The small stream spoken of runs about one hundred and twenty-five feet north of the camp. There are many acres of a calcareous deposit from this stream, covered by one or two feet of clayey soil, and on this, where there is a slope of one foot in fifteen, the quarters are built.

The barrack faces the east, is  $39\frac{1}{2}$  by  $21\frac{1}{2}$  feet, with walls 6 feet high and 18 inches thick; has a canvas roof and dirt floor, and has a door and two small windows in each of the walls, front and rear. The doors and windows are canvas. There is a large chimney at the south end, which heats the room and makes it quite comfortable. The men sleep on rough, wooden single bedsteads, provided with ticks filled with grass, and plenty of blankets. The beds are arranged around the rooms with the heads toward the walls.

North of this house eighteen feet is an adobe kitchen and dining-room in one, 23 by  $16\frac{1}{2}$  feet, with walls 8 inches thick. It is also covered with canvas, and contains a stove and cooking-utensils, a table, benches, &c. Outside at the north end is an oven in which the bread is baked.

Officers' quarters consist of hospital-tents framed and floored, and provided with adobe fire-places and chimneys.

The guard-house is a wall-tent. The place of confinement for Indian prisoners is a hole sixteen

feet square, dug in the side of a steep hill. A stone wall ten feet high is built on each side, and it is covered with a dirt roof. Although it is not to be commended, it is warm, well ventilated, and secure, and is the best that could be devised for a temporary guard-house.

As there are no hospital accommodations here, this being but a temporary camp, men sick enough to go to hospital are usually sent to Camp Verde. A wall-tent is used as a dispensary.

There are no stables for the horses; they are kept one hundred feet in rear of the quarters. Back still farther is the siuk; a new one is dug every two months. The Indian prisoners are constantly cleaning up; the refuse is burned, so the camp is kept very clean.

There is a heavy growth of cedar on the hills all around, and this is the wood furnished by the contractors for fuel.

The duties while here are light, but in the mountains a great deal of the scouting is done on foot; three or four days' rations have to be carried, besides a blanket, carbine, and cartridges, and the duties are very arduous. High mountains have to be climbed, and deep, rocky cañons crossed under a broiling sun or through the snow, in order to find hostile Indians. The rarified air frequently adds greatly to the fatigue, causing palpitation of the heart, dyspnoea, and often exhaustion.

*Consolidated sick-report, Rio Verde Indian Reservation, Ariz., 1873-'74.*

Year .....	1873-'74.*	
Mean strength.....	{ Officers .....	1
	{ Enlisted men .....	21
<b>Diseases.</b>		
	GENERAL DISEASES, A.	
Intermittent fever .....		26
	LOCAL DISEASES.	
Gonorrhoea .....		2
Other local diseases .....		3
Total disease .....		31

\* 10 months only.

SAN CARLOS INDIAN RESERVATION, ARIZONA TERRITORY.

REPORT OF ACTING ASSISTANT SURGEON H. M. MATTHEWS, UNITED STATES ARMY.

The camp at the San Carlos Indian agency is a subpost of Camp Apache, is situated on the San Carlos River, and is distant seventy-four miles west of south from that post.

The garrison is quartered in tents. The enlisted men have one adobe building, 50 by 30 feet, which is used as a kitchen and mess-room.

A rough log building, lighted and ventilated through the crevices between the logs, and warmed by an open fire-place, is used as a guard-house. Its principal occupants are refractory Indians from the agency.

There is one storehouse built of adobes, used by both the commissary and quartermaster. It is 72 by 24 feet, with a dirt roof.

Mesquite and cottonwood, obtained by contract, are used for fuel.

A small room added to the storehouse is used as a dispensary and store-room for medical supplies.

## CAMP VERDE, ARIZONA TERRITORY.

REPORTED BY ACTING ASSISTANT SURGEON L. SANDESON, UNITED STATES ARMY.

Camp Verde is situated in Yavapai County, Arizona, in latitude  $34^{\circ} 33'$  north; longitude,  $34^{\circ} 57'$  west; at an elevation of 3,500 feet above the level of the sea, and about 80 feet above the water of the Rio Verde, upon its right or western bank, and from the nearest point of which it is distant about a mile. It is about forty miles east of Prescott, the nearest town and post-office, from which the mails are brought at irregular intervals by a person from the camp for that purpose. Camp McDowell is ninety miles south by trail along the Verde, through a country extremely rough and broken.

The valley of the Rio Verde, through the greater portion of its course from north to south, is very narrow, being little else than a cañon, with bare and rugged hills on each side; but in this locality it is about seven miles wide, with a rich alluvial bottom, which produces a rank vegetation, with a luxuriant growth of cottonwood, willow, and alder, and which, when irrigated, yields excellent crops of corn, barley, and vegetables. The Mogollon range of mountains bounds this valley on the east, the Black Mountains on the west. The latter rise to an elevation of about 3,000 feet above the river, and furnish pine timber suitable for building. Deer, antelope, and wild turkeys abound. Gold has long been known to exist in the vicinity, but has not been mined until recently, on account of the hostility of the Indians. Diggings commenced last summer have been found to pay liberally.

Old Camp Verde, formerly Camp Lincoln, was originally established by Arizona volunteers mostly Mexicans, during the war of 1861, as an outpost from Fort Whipple, to protect Prescott County and admit of its settlement. It was first occupied by regular troops in 1866. The first shelters erected were of the most primitive character, and the more permanent quarters, commenced in 1868, were never completed. The location was considered unhealthy and unsuitable; and in the spring of 1871 the present site was selected, and the building of a new post commenced. The location is a mesa, about one mile south of the old post, and half a mile south of the confluence of Beaver Creek with the Verde. In September of the same year work was abandoned from the discharge of citizen employés. Three sets of company quarters, the guard-house, and two sets of officers' quarters had then been finished, and the frame of a third set had been put up. Nothing further was done until September, 1873, except what could be accomplished by the labor of the troops. By their labor alone the third set of officers' quarters was rendered habitable, and a building similar to the company quarters, (now used as store-house for the quartermaster and commissary stores,) provisionary hospital, a temporary corral, and three stables were built. Work was resumed in the early part of September, 1873, and continued through the succeeding year.

The present garrison consists of two companies of cavalry and two of infantry. The buildings of the post are arranged on three sides of a rectangular parade, 692 by 481 feet. The south side is occupied by a building of "pice," 100 by 20 feet, with a piazza 6 feet wide. It is divided into offices for the adjutant, quartermaster, and commissary, a school-room, and three sets of laundresses' quarters. Adjacent to this is an adobe building, 130 by 20 feet, with a piazza 6 feet wide, occupied as quarters for married soldiers. It is divided by transverse partitions into ten sets of quarters. Each set is again divided into two rooms, 12 by 13 feet and 12 by 7. Upon the east side are the three sets of officers' quarters—frame buildings lined with adobes. They are one story high, 50 by 18 feet, with each a wing 34 by 18 feet. The main building is surrounded by a piazza 12 feet wide. Each set contains, besides the first floor, attics for store-rooms and servants' rooms. The west side contains four sets of company quarters, three frame buildings, and one of "pice." Each consists of a one-story building, 100 by 24 feet, with L 76 by 24. The main building contains dormitory, office, and store-room; the wing, saddle-room, kitchen, and mess-room. The dormitories are 72 by 24 feet, and 12 feet to the eaves, furnished with double wooden bunks in single tiers. They are ventilated by doors, windows, open fire-places, and latticed windows at the gable ends. Each dormitory is lighted by six windows. The kitchens are 25 by 24 feet; the mess-rooms 42 by 24. In the infantry quarters, a tailor-shop takes the place of the saddle-room.

The guard-house is a frame building, 51 by 32 feet, by 12 feet to the eaves, and is divided into a guard-room, 16 by 21 feet, warmed by stoves, two prison-rooms of the same size, and five cells,

8 by 3 feet, lighted and ventilated by long, narrow apertures near the ceiling. The average number of prisoners is eleven. It stands on the west side of the parade.

The provisionary hospital, built by the troops, is a frame structure, 80 by 24 feet, and 12 feet to the eaves, unceiled and unlined, except the ward, which is ceiled and lined with old canvas. The south end is occupied by the ward, 28 by 24 feet. It contains eight beds, with an air-space of 8,064 feet. The dispensary and dining-room, each 12 by 18 feet, communicate with the ward. These rooms communicate with store-rooms, each 12 by 15½ feet. The steward's quarters and laundry occupy the north end of the building, and are each 12 by 16 feet, without communicating with the other parts of the building. There is a separate kitchen, 12 by 10 feet, a few yards in rear of the mess-room. The hospital is in the same line with those buildings which form the west side of the parade. It contains no post-mortem room, bath-room, or water-closet. A bath is occasionally extemporized in the dining-room, and an earth-closet is used in the ward. The building is quite unsuited to the purpose for which it is used. The average number of patients in the hospital is two.

The magazine is a stone building, about one hundred and fifty feet to the rear of the west line of buildings. The bakery is built of adobes, 20 by 30 feet, and contains two ovens, with a capacity of one hundred and fifty loaves each. Two sets of officers' quarters, uniform in size with the others, and a commissary store-house of "pice," were erected in 1874.

The cemetery is about two miles northeast of the post, and is inclosed by a substantial fence, 154 by 50 feet, and contains the graves of eighteen soldiers and six citizens, most of whom fell victims to hostile Apaches. The graves are covered with stones, to protect them from the coyotes.

No trees of any kind grow upon the mesa, and the buildings are exposed to the full glare of the sun's rays, which at times are very intense. Should water, however, be brought upon the parade-ground, as is expected, a luxuriant shade could be quickly produced from cuttings of cottonwood.

The supply of water for the post is brought by water-carts from a spring on Beaver Creek, one mile distant, for drinking purposes, and from the river for other uses. The spring-water is cold, even in summer, and holds but little inorganic matter in solution. Other methods of obtaining a more abundant supply of water are in contemplation.

Company-gardens are cultivated along the river, about a mile and a half above the camp, which furnish to the garrison a supply of vegetables, excellent, varied, and abundant. There is no garden set apart specially for the hospital.

The Rio Verde Indian reservation extends from about three miles above Camp Verde for forty miles along the river, and ten miles on each side. On this reservation are about two thousand Indians, consisting of the Mojave, Yuma, and Tonto bands of Apaches, who, until the spring of 1863, were roaming the mountains, committing depredations, but who now, for the most part, seem disposed to remain on their reservation, and even to adopt some of the customs of civilized life.

*Meteorological report, Camp Verde, Ariz., 1870-'74.*

Month.	1870-'71.				1871-'72.				1872-'73.				1873-'74.			
	Temperature.			Rain-fall in inches.												
	Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.	
July	85.15	108	69	3.06	89.21	109	74	0.84	85.12	104	64	2.22	86.75	113	48*	0.14
August	80.49	100	59	0.89	86.94	105	70	0.98	80.62	102*	50*	4.35	81.17	102	58*	2.52
September	74.19	101	48	0.00	76.93	100	50	1.09	74.78	100*	36*	1.12	75.68	97	41*	0.00
October	63.29	99	35	0.60	60.79	87	33	1.10	64.13	93*	16*	0.10	62.00	95	21*	0.00
November	54.08	84	30	0.10	47.23	66	32	0.39	46.30	72*	6*	0.00	49.78	74	20*	0.74
December	38.77	75	8	0.58	44.64	64	23	0.96	43.33	69	16	0.83	39.33	57	6*	3.26
January	45.14	66	22	0.30	39.53	66	22	0.47	42.22	69	10	0.00	40.80	50	5*	2.65
February	45.32	69	26	0.00	42.34	70	34	1.12	43.46	63	20	1.18	40.37	60	12*	2.05
March	53.89	80	33	0.02	52.72	80	31	0.16	59.12	82	38	0.00	51.24	79	19*	1.05
April	65.22	87	37	0.73	63.91	94	37	1.56	61.58	90	31	0.00	57.50	87	27*	1.48
May	71.90	97	50	0.00	75.25	111	49	0.54	69.90	95	45	0.15	70.23	102	34*	0.08
June	85.87	109	64	0.00	80.57	110	54	0.66	80.15	112	47*	0.20	81.14	107	43*	0.00
For the year	62.61	109	8	6.18	64.31	111	22	2.36	62.56	112	6*	10.13	60.49	113	5*	14.19

\* These observations are made with self-registering thermometers. The mean is from the standard thermometer.

## Consolidated sick-report, Camp Verde, Ariz., 1870-'74.

Year .....	1870-'71.	1871-'72.	1872-'73.	1873-'74.				
Mean strength .....	7 912	6 141	5 131	4 152				
	{ Officers.....							
	{ Enlisted men.....							
Diseases.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<b>GENERAL DISEASES, A.</b>								
Remittent fever .....		2		1				
Intermittent fever .....	206	136		187		110		
Other diseases of this group .....	2			3		11		
<b>GENERAL DISEASES, B.</b>								
Rheumatism .....	11		7		12		14	
Syphilis .....	3		1		1		4	
Consumption .....	2		2					
Other diseases of this group .....	1		1		1		3	
<b>LOCAL DISEASES.</b>								
Catarrh and bronchitis .....	6		25		24		13	
Pneumonia .....					1			
Pleurisy .....	3							
Diarrhoea and dysentery .....	19		15		42		35	
Berria .....					5		1	
Gonorrhoea .....					3		5	
Other local diseases .....	47		56	1	70	1	84	
Alcoholism .....			3		7		5	1
Total disease .....	298		248	1	358	1	285	1
<b>VIOLENT DISEASES AND DEATHS.</b>								
Gunshot wounds .....	2	1	1	2	4		3	
Other accidents and injuries .....	38	1	39		63		59	
Total violence .....	40	2	40	2	67		62	

## FORT WHIPPLE, ARIZONA TERRITORY.

REPORTS OF ASSISTANT SURGEONS P. MIDDLETON AND HENRY LIPPINCOTT, UNITED STATES ARMY.

This post is on the left bank of Granite Creek, a small stream, one of the sources of the Rio Verde, and is one mile northeast from the town of Prescott, the county-seat of Yavapai County, and headquarters of the Department of Arizona; latitude, 34° 29' 6" north; longitude, 35° 27' 30" west.

The valley of Granite Creek is one of the many to be found around the base of Granite Mountain, the northern extremity of the Sierra Prieta. Its whole extent is covered with pine timber and as the small plateau on which the post and town are built is receded from, the ground, still timbered, becomes much broken by ravines, and finally rises to the bare mountain-peaks of grayish granite. But on the northwest, beyond the immediately surrounding hills, the country is open and rolling, covered with bunch-grass and dotted with spreading juniper, until the Bill Williams and San Francisco Mountains break through and interrupt its undulations. Prescott, formerly the capital of the Territory, is a small town, the center and supply-depot of a large but sparsely settled mining and agricultural district. The numerous valleys within a radius of thirty miles have rich but limited bottom-lands, many of which are cultivated, and yield all the produce of temperate climates; the mountains are rich in free gold and gold sulphurets. It is reached from San Francisco by way of Los Angeles to Fort Mojave and Willow Grove, which lies west from it about one hundred miles, or along the southern road from Los Angeles and San Bernardino, by way of La Paz, on the Colorado River.

The post was first located December 23, 1863, near Postal's Ranch, twenty-four miles northeast of Prescott. The location was changed and the present post established May 18, 1864, as the then headquarters of the District of Arizona. The site selected was on a small plateau, a mile above the town, and seventy feet above the level of the creek, to which it inclines, yielding a good natural drainage. It originally consisted of a rectangular stockade, the wall of which formed the outer

wall of the various buildings inclosed in it. It was built of strong undressed pine logs, the crevices being filled in with mud, and the roofs of all the buildings shingled. Ventilation was imperfectly effected, as most of the doors and windows opened on the inclosed parade-ground. The men's quarters, kitchen, and bakery occupied one side, with the officers' quarters opposite; the store-rooms another, with the guard-house, adjutant's office, and laundresses' quarters opposite.

The present buildings were all erected during and since the year 1872, except the guard-house.

The quarters for enlisted men consist of the following buildings: One frame barrack, 140 by 30 feet, 12 feet in height, shingle roofed, with a wing, 30 by 15 feet, in rear of each end. The main portion is divided into two dormitories, each 65 by 30 feet, with a hall 10 feet wide between them. The wings are each divided into two rooms of equal size, one used as an orderly's room, the room adjoining it is a store-room; in the other wing one room is used as a tailor-shop, the adjoining one as a bath-room. A porch 10 feet wide extends around the whole building. There is another barrack building, similar in all respects to the above, except that the main portion is only 110 feet long by 24 feet wide. In rear of, and fifty feet distant from, the barrack buildings are the kitchens and mess-rooms. The set belonging to the larger barrack is in a building 75 by 24 by 12 feet, divided into a mess-room, 45 by 24 feet, a kitchen, 20 by 24, and a store-room, 10 by 24 feet. The set belonging to the other barrack is in a building 70 by 20 feet, divided similarly to the other. The band is quartered with the infantry soldiers in the smaller barrack, but occupies an old shed as a kitchen and mess-room. The dormitories afford an air-space of 780 cubic feet per man of average occupancy. Each of the dormitories in the larger barrack has eleven large windows; those in the smaller have eight each; these, in connection with the doors and open fire-places, furnish excellent ventilation. The rooms are warmed by stoves and fire-places, and are furnished with single bedsteads and other necessary furniture and fixtures.

Married soldiers' quarters consist of a frame building divided into twelve sets, each set comprising a front room, 15 by 14, and a back room, 12 by 14 feet. All the rooms are 12 feet from floor to ceiling, and are comfortable. A porch, 8 feet wide, extends along the whole front of the building.

Officers' quarters consist of eight sets, all frame buildings one and a half stories in height. One set contains four rooms, 15 by 15 feet each, two of these on each side of a hall 8 feet wide, running from front to rear. In rear of, and adjoining these rooms, is a kitchen, 12 by 12 feet, a pantry bath-room, cellar and usual out-houses. The attic is finished for servants' rooms, &c. The other sets are all built on the same general plan. They each contain two rooms, each 15 by 15 feet, communicating with a hall running from front to rear; have a kitchen 9 feet square, with adjoining rooms similar to the set first described. The attics are also similarly finished; the rooms on the first floor of each building are all 9 feet in height, and in all respects they are excellent quarters.

The guard-house, used at present, is the old stockade one. An excellent stone building for this purpose is in course of construction; its dimensions are 61 by 33 feet, 12 feet in height. It will contain a guard-room, 14 by 22 feet; a prison, 13½ by 22 feet; 6 cells, each 7 by 3 feet, and a hall 17 by 4 feet; will be warmed by stoves, lighted by windows, and ventilated by grated windows and doors.

The commissary storehouse, built in 1872, is an adobe building with shingle roof. It is 125 by 24 feet, divided into a store-room 86 feet long, in the central part, with a smaller-sized room at each end. The quartermaster's storehouse, just completed, is 119 by 24 feet.

The stables afford room for 84 horses; connected with them are a saddle-room, quarters for the commissary-sergeant of cavalry, saddler's and farrier's room, and forage-room. The corral, inclosed by a board fence which includes the stables, &c., is 150 by 120 feet.

The old hospital building, located between the post and the town of Prescott, was burned down November 23, 1874. A new hospital built of adobe is in process of construction, and nearly completed at this time, (December 31, 1874.) It will consist of an administration building, crossed by two halls 8 feet in width, running at right angles to each other, and will contain six rooms, each 15 feet square, intended for dispensary, isolation-ward, steward's room, nurse's room, store-room, and a spare room. A ward, 50 by 24 feet, in the form of a wing, adjoins one end of this building; a piazza 10 feet wide surrounds the whole. At the farther rear corner of the ward, a portion of

the piazza is inclosed, forming a room 9 feet square, inside, for the earth-closet. The walls be heated by two stoves.

About twenty yards in the rear of the above is an adobe building containing a dining-room 12 feet square; a kitchen and laundry, each 12 by 15 feet; a pantry and bath-room, each 8 by 12 feet. A piazza 8 feet wide entirely surrounds this building, and a covered way 6 feet wide connects with the hospital building. A dead-house and privy are about thirty yards in rear of the barracks.

The water supply of the post is derived from wells, and is of excellent quality, cold and pure. It is raised by a force-pump, and distributed to the buildings by pipes.

The post garden is on the creek, just east of the garrison; potatoes, cabbages, turnips, beets, tomatoes, melons, and cucumbers are successfully cultivated.

Neither game nor fish is found within a reasonable distance. There are no Indians nearer than the Rio Verde reservation.

The climate of this district is mild during the spring and summer months, there being no long-continued and scorching heats which, in the southern portion of the Territory, kill the vegetation except that on the margin of the streams. Frequent rains fall in the autumn, and during the winter the mountains are covered with snow, which, in severe seasons, may lie even in the valleys for two or three weeks at a time.

Meteorological report, Fort Whipple, Ariz., 1870-74.

Month.	1870-'71.				1871-'72.				1872-'73.				1873-'74.		
	Temperature.			Rain-fall in inches.	Temperature.			Rain-fall in inches.	Temperature.			Rain-fall in inches.	Temperature.		
	Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.		Mean.	Max.	Min.
July	72.92	89	57	7.98	77.13	92	66	4.00	74.97	86	31*	3.74	78.11	91	60
August	69.08	83	57	3.49	76.38	91	64	1.80	72.51	87	48*	6.25	73.14	85	64
September	61.40	82	45	0.00	68.16	88	47	1.51	68.73	80	32*	0.04	62.97	79	58
October	52.91	77	30	1.39	56.10	74	37	1.40	57.56	78	12*	0.34	55.68	61	50
November	46.88	67	43	0.30	43.82	62	19	0.52	44.98	68	—	0.00	46.73	71	50
December	33.19	69	4	0.53	41.80	60	17	0.00	40.25	66	19	0.54	35.09	63	49
January	40.73	70	15	0.70	35.77	60	—	0.50	39.09	60	11	0.00	38.57	67	41
February	43.50	68	21	1.20	42.68	66	10*	0.60	36.35	55	13	(1)	35.46	55	46
March	50.12	75	34	0.10	47.19	63	12*	0.13	51.22	73	25	0.23	41.50	63	50
April	56.48	71	33	1.92	49.56	75	13*	1.62	53.69	77	29	0.17	49.62	75	50
May	62.73	81	44	0.47	63.83	86	31*	1.47	60.26	74	45	0.40	60.91	82	41
June	71.79	92	50	0.00	72.80	88	36*	1.24	72.93	92	50	0.42	71.97	88	50
For the year	54.64	92	4	18.28	56.27	92	—	14.98	56.04	92	—	1*	54.72	91	48

\* These observations are made with self-registering thermometers. The mean is from the standard thermometer.

Consolidated sick-report, Fort Whipple, Ariz., 1870-74.

Year	1870-'71.	1871-'72.	1872-'73.	1873-'74.
Mean strength	698	668	615	615
	{ Officers	{	{	{
	{ Enlisted men	{	{	{
Diseases	Cases.	Deaths.	Cases.	Deaths.
GENERAL DISEASES, A.				
Typho-malarial fever				
Remittent fever			1	7
Intermittent fever	68		3	4
Other diseases of this group	3		11	11
GENERAL DISEASES, B.				
Rheumatism	10		3	7
Syphilis	5		7	4
Consumption				
Other diseases of this group	4		1	3
LOCAL DISEASES.				
Catarrh and bronchitis	22		10	19
Pneumonia	3		1	
Pleurisy				1

Consolidated sick-report, Fort Whipple, Ariz., 1870-'74—Continued.

Year .....	1870-'71.		1871-'72.		1872-'73.		1873-'74.	
Mean strength .....	{ Officers..... Enlisted men.....		6 95	4 68	6 145	5 132		
Diseases.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
LOCAL DISEASES, CONTINUED.								
Diarrhœa and dysentery.....	30		4		10		40	
Gonorrhœa.....	1		1		3		2	
Other local diseases.....	43	1	16	1	36	1	70	1
Alcoholism.....	8		1		3		58	
Total disease.....	108	1	48	1	110	1	319	2
VIOLENT DISEASES AND DEATHS.								
Gunshot wounds.....	6	1	3	1	2		1	
Other accidents and injuries.....	51		24		23		102	
Homicide.....						1		
Suicide.....								2
Total violence.....	57	1	27	1	31	1	103	2

FORT YUMA, CALIFORNIA.

REPORTS OF ASSISTANT SURGEONS J. V. LAUDERDALE AND GEORGE S. ROSE, UNITED STATES ARMY.

To protect the emigrants of Southern California from the attacks of hostile Indians, it became necessary in the year 1850 to establish a military post from which assistance could be promptly extended when required. With this object in view, on November 27th of that year, Bvt. Maj. S. T. Heintzelman, captain Second Infantry, received instructions from headquarters of the tenth military district, Monterey, California, to establish a post somewhere near the junction of the Gila with the Colorado. The camp was first established on the "bottom," near what was known as "the old ferry crossing," about a half mile below the junction of the two rivers, but was subsequently moved in March, 1851, to the top of the bluff, on the site of an old "Spanish mission," said to have been in operation in the year 1700. Owing to the scarcity of supplies, and the difficulty of obtaining provisions, the camp was abandoned in June, 1851. On the 29th of February, 1852, Major Heintzelman returned and re-established a permanent garrison.

Fort Yuma is located in latitude 32° 23' 3" north; longitude, 37° 33' 9" west; altitude, 267 feet above tide-water. The rocky bluff on which the fort is built is, at its highest point, just 110 feet above the bank of the river.

After receiving the Gila at a point one hundred and eighty miles from its mouth, the Colorado River turns suddenly westward and forces its way through a rocky defile, 70 feet high, 350 yards long, and 200 yards wide, thus cutting off a narrow rocky bluff and leaving it as an isolated eminence on the California side of the river. On this rocky eminence, which has been shifted not many ages since from the Arizona to the California side of the ever-varying stream, (and during high water it is hard to tell which side it is on, as the water flows freely all around it,) stands Fort Yuma, rising gray and somber above the broad sea of green as it is approached on the emigrant road from Pilot Knob. At this point the bottom-lands adjacent to the river average seven miles in width, and are covered with a dense growth of cottonwood and mesquite. Chains of low serrated hills and mountains limit the view on nearly every side, all bare and gray, save when painted by the sun with delicate tints of blue and purple.

The river at the fort is two hundred yards wide, shallow, except in its channel, and impeded by sand-bars. The first successful effort to navigate the Colorado was made in December, 1852. A small side-wheel steamer, the Uncle Sam, made the first voyage, consuming fourteen days from the mouth of the river; the delay, however, was chiefly owing to an accident to the boiler. In the spring of 1854 Mr. George A. Johnson built and equipped a new steamer, the General Jesup,