

advantages of different positions for military posts, having particular reference to healthy locations, &c., &c.

In reporting upon the resources of the country, you will designate particularly those that may be useful to a military command, such as forage, building materials, &c.

After the completion of these duties with Major Kingsbury's command, you will make an examination of the valley of the Sacramento to about the latitude of 39° 20′, or the mouth of Butte river, collecting and reporting any information that may be useful upon the subjects above referred to. It is not designed at this time that you make a detailed survey of the country you examine, or that your report should be confined to personal observation; on the contrary, the General desires that you will imbody in your report any reliable information that you may derive from the inhabitants of the country, as well in relation to the general as to the military resources of the country.

It is supposed that you obtained at Benicia the instruments, &c., that you require for the performance of this duty. If, however, you were unable to do this, you are authorized to purchase such as are indispensably necessary. If without funds, you are desired to estimate at your earliest convenience for funds, in order that the commanding general may make the necessary arrangements for supplying you.

You are authorized to employ three assistants at the average wages of the country, and to purchase the horses and pack animals that may be necessary.

So soon as these duties are completed, you will report in person at department headquarters; and the General directs me to impress upon you the importance of completing them at the earliest possible period, as your services are greatly required at other points.

These instructions will be sent in triplicate.

Very respectfully, sir, your obedient servant,

E. R. S. CANBY, Assistant Adjutant General.

LIEUTENANT G. H. DERBY, Topographical Engineers.

Begin Report

LIEUTENANT DERBY'S REPORT

Topographical Office, Headq'rs Tenth Military Dep't,

Monterey, California, December 1, 1849.

Major: In compliance with the above instructions, which I had the honor to receive on the 17th September, on my arrival at camp Anderson, near Sutter, California, I immediately reported to Captain H. Day, who I found had relieved Major Kingsbury, in command of the battalion of the 2d infantry, stationed at that point. I had not received department special orders No. 44, dated September 4; and having, therefore, no previous information of the duties assigned me, was entirely unprepared with either instruments or funds for their execution.

Finding, however, that Captain Day was about to move from camp Anderson, and my services being required in the selection of a site for the new military post contemplated, and having no time to communicate with department head-quarters, (as, by *ordinary* means of communication, a month would be required for that purpose, and an express could not be sent at a less expense than \$1,000,) I concluded to purchase on credit such instruments, animals, and other indispensables as might be required for the survey, and to forward to the department, at once, my estimates, trusting that they would be received and honored before my return. This course, I may add, was in accordance with the advice of the senior officers of the station, whose opinion I of course solicited immediately upon receiving my instructions.

I therefore proceeded at once to engage the services of an assistant, three rodmen, and a teamster, who, with my servant and a gentleman named Kemp, who volunteered to accompany me as far as Bear creek, composed my party. I had succeeded in procuring a circumferentor and chain left by Captain Warner (before starting on his late melancholy and fatal expedition) in the hands of Judge Schoolcraft,9 at Sacramento City, but was compelled to purchase a chronometer, sextant, artificial horizon, and an additional compass and chain. I then procured from Messrs. Smith, Bensley, and Company a wagon with six mules, for the transportation of our instruments, subsistence stores, forage, &c., the necessary riding animals for the party, and such articles of mess furniture, &c., as we required; for all of which, together with five hundred dollars, which they advanced me for the expenses of the road, they very kindly gave me credit. I was obliged to pay a much higher price for my mules and wagon, from the fact that the expedition for the relief of the emigrants, under the command of Major Rucker, was at this time being fitted out at Sacramento City, and his large purchases of animals and means of transportation had created a scarcity of both throughout the adjacent country.

We left Sacramento City at 2 p.m. on the 22d of September, intending to make a short march in advance of the infantry command for the purpose of trying our mules, those composing the team having never been worked together in harness.

Leaving Sutter's fort about a half a mile to our right, and crossing the bottom land between the Sacramento and American rivers in a direction N. 30°E. from the city, we arrived at the lower ford of the American at 5 p.m., having made a distance of nearly two miles in three hours, without further accident than breaking the tongue of the wagon, which we repaired upon the spot by wrapping the fractured part tightly with rope. This was owing to the refractory conduct of our team, which, upon arriving at the ford, utterly refused to pull the wagon across; so, after exhausting the usual arguments, manual and vocal, resorted to in such cases, I was fain to hire an individual, who was luckily passing at the time with eight yoke of oxen, to assist us, which he did with such effect that we soon found ourselves on the opposite bank of the stream, with a smooth road before us. The American river, at whose junction with the Sacra-

mento the city is situated, is at this ford about three hundred yards in width: the banks are some thirty feet in height, but gradual and easy of ascent, which is not the case at the ford (Child's) some eight miles above. A sand-bar, which at extreme low water is exposed, forming a small island in the middle of the river, makes out from the southern bank. At the time of our crossing the water was quite low, varying from eighteen inches to two and a half feet in depth; but at the commencement of the rainy season it swells rapidly-three days of heavy rain being sufficient to raise it from four to six feet. The tide rises and falls at Sacramento City, causing a variation in the depth between high and low tides of from six to fourteen inches. On crossing the American, we passed through a fine grove of oaks which borders the stream through its entire extent. and, striking a more northerly direction, arrived without further accident at Dry creek, which at the time was, with the exception of a few holes, perfectly dry, but which in the rainy season is quite a considerable stream, rising in the spurs of the Sierra Nevada and running in nearly a westerly direction to the Sacramento. Its distance at our point of crossing from the ford of the American is six miles and a half. Here we encamped for the night, finding water in considerable quantity about one and a half mile east of the road in the bed of the creek. About 9 p.m. Captain Day's command came up and encamped in our vicinity. The plain between the American river and this creek is of dark alluvial soil, and, with the exception of a range of low sand-hills running parallel to, at a distance of six miles from, the Sacramento, is an almost unbroken level, extending east about twenty miles, where it rises into low hills, which commence the western slopes of the great Sierra Nevada. A small field of tulé commences with the Dry creek, extending nearly to the Sacramento. Upon the commencement of the rainy season the soil upon this plain greedily absorbs the water, and in a few days becomes a thick, tenacious quagmire, which it is difficult, not to say dangerous, to attempt crossing, even with pack-animals. The tulé at this time is preferable for crossing, as its thickly-interlaced roots, until thoroughly saturated with water, continue elastic, affording for some days a safe passage to terra firma.

We made observations for latitude and longitude by meridian altitude of the sun on the 23d, and left our encampment at 5 p.m., proceeding over a plain of precisely the same character as that of yesterday, with no alleviation of its unbroken surface to the eye but the distant outline of the timber bordering the Sacramento and Feather rivers.

After marching fifteen miles N 10° W. (by the compass) we came to a small pool of stagnant water, where we found several emigrant families encamped, although there was no wood or grass in the vicinity; and proceeding one and a half mile further on, we came to a small pond, where we encamped at 10 p.m., managing to procure a scanty supply of wood for our camp fires from the stunted alders which surrounded the muddy and unwholesome looking water. Leaving our encampment at 8 a.m., we soon arrived at the rancho of Nicholas Altegier, situated in a fertile spot at the junction of Bear Creek and Feather

river. Mr. Altegier is an old resident of the country, and his farm at this place being a well-known position, has from time immemorial been called "Nicholas Rancho," he himself being universally known as "Nicholas" only. He has a field enclosed containing about a quarter square mile, apparently of the most fertile soil, and owns a large adobe house of two stories in height, which presents quite an imposing appearance in this country of log-huts and Indian rancherias. About 100 wretched Indians, playfully termed Christian, live in the vicinity upon the bank of the Feather river, subsisting upon acorns (which, pulverized with roasted grasshoppers, they form into a cake) and salmon, with which delicious fish the river abounds. The more intelligent and docile of these creatures are taken and brought up on the farm, where in time they become excellent vaqueros, or herdsmen, and where they are content to remain, receiving in return for their services such food and clothing as it may suit the interest or inclination of its owner to bestow upon them. About one mile south of "Nicholas Rancho" the road divides—the right hand path leading directly across the plain to Johnson's rancho,11 (now Gillespie's, on Bear creek,) the left passing "Nicholas Rancho," and crossing the creek about one and a half mile from its mouth. A path leads from this crossing directly up the bank of the creek, and joins the right-hand main road again about six miles south of "Gillespie's."

The right-hand main road is the "Truckee route," or emigrant trail, from the Salt Lake via Truckee river; the left is "Lawson's route," or the northern emigrant trail, entering at the head of the Sacramento valley, near the headwaters of the Feather river. This latter route is some 300 miles farther than that by Truckee river, but has the advantage of easier ascents and descents, and generally affording better pasturage for cattle.

Leaving "Nicholas Rancho," we continued upon the river road, passing the crossing, and encamped at a distance of ten miles from the house upon Bear creek, in a beautiful grove of oaks and sycamores, surrounded by high grass which borders the creek for some two miles in depth on either side, and which afforded to our tired animals the most extreme satisfaction. Here Captain Day concluded to leave his command encamped, while making an examination of the country in the vicinity; this point being within five miles of the first proposed in our instructions, and within easy riding distance of the remaining points proposed for selection. Accordingly, leaving my company in charge of my assistant, (Mr. J. H. Newete) I accompanied Captain Day on the morning of the 25th, for the purpose of assisting in the selection of the site for the proposed military post. Proceeding (by compass) in the direction N. 45° E., we arrived at Johnson's rancho, a small one-story adobe building, at a distance of five miles from our encampment upon the north bank of Bear creek. Here we were kindly received and entertained by the proprietor (Mr. E. Gillespie,) who volunteered to accompany us in our examination of the rancho. We accordingly rode over and made a general reconnoissance of the country in the immediate vicinity, embracing some ten or twelve square miles, and, returning late in the evening, slept at Mr. Gillespie's house. On the 26th we left Johnson's

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rancho for an examination of the banks of the Yuba river and the adjoining country, striking the Yuba at "Cordua's" or "Speek's" bar, direction N. 25° W., distance seventeen miles. Here we found a company of nearly one hundred miners busily engaged in the bed of the stream, which they had partially exposed by constructing an oblique dam extending nearly across. They informed us that their operations at this point had proved extremely successful, each individual averaging from two to three ounces per diem. Deer creek joins the Yuba on the south about two miles above Cordua's bar, upon the banks of which the richest deposites of gold yet discovered in California have lately been found.

The result of our examination was the selection of a site about half a mile above the store at Johnson's rancho, on Bear creek. This point possessed all the merits of others examined, and was comparatively free from objectionable circumstances. Being at the foot of the Sierra Nevada slope, the reserve could be made to include a sufficient space of high ground, not subject to the periodical overflows of the creek, for building the necessary barracks for the troops, while the rich bottom land bordering the creek on either side afforded an excellent opportunity for gardening purposes. A grove of fine oaks answers the purpose of shade for an encampment during the summer months, while the hills in the vicinity are covered with trees, affording a sufficiency of wood for fires, and of logs for houses. The summits of the adjacent hills crop out with a species of sandstone, which, if quarried, would answer admirably for the construction of chimneys and foundations for buildings. Its proximity to the rancho is also an advantage, insuring a constant supply of fresh meat, and we found the water of the creek at all times healthy, cool and pleasant. But the central position of this locality is probably its greatest advantage. The Truckee emigrant route, over which was passing an average of one hundred wagons and two hundred emigrants per diem, the wagon road to the Yuba mines, that to the Feather river "dry diggings," the trail to Rose's rancho14 on the Yuba, striking into Lawson's route at a distance of twenty miles, and the paths to the Bear Creek diggings, all intersect at this point; while the post is, moreover, within a few hours' ride of all the principal ranchos and Indian rancherias, or villages, in this part of the valley. There are several points on Feather river, and one upon the Yuba near Rose's rancho, where much prettier and romantic sites may be found combining most of the advantages of this upon Bear creek, but the notoriously unhealthy character of these locations offered an insuperable objection to their being selected.

We found, upon inquiry, that there had been but little sickness upon Bear creek during the summer among the Indians or the emigrants, who had encamped for weeks upon its banks; while at Sutter's farm, on Feather river, and at the ranchos on Yuba, most of the occupants had suffered with the periodical fever, and several deaths had ensued.

Within three or four miles of the post, gold is found in small quantities in the ravines running towards the creek; digging for which will prove a healthy

and profitable recreation for the unemployed soldiers, and will probably be the occasion of preventing many desertions that might otherwise occur.

We returned to our encampment on the 27th of September, and made observations for the latitude and longitude. The longitude worked out was probably incorrect, the chronometer having changed its rate from travelling in the wagon: the latitude we made 39°0'6". We found a very unpleasant incident had occurred on the morning of the 27th. My servant Manuel Montano, who had been with me some two months, and had always appeared remarkably honest, faithful, and attentive, deserted, after cutting a hole in the back of my tent, through which he thrust his hand and removed from a box beneath the head of my bed my purse, containing \$425 public funds, a gold pencil, gold watch and chain, a pistol, and some other articles of value; he also cleared out his room-mates, taking whatever money they possessed, and left on the best horse we had, carefully selecting the best saddle and riding equipments in the possession of the party. We discovered this at reveille, when he had been gone probably some hours, and Mr. Kemp immediately volunteered to start in his pursuit. I accordingly despatched him, with another horse, upon the road to Sacramento, judging that Manuel, who was a Chilian, and knew nothing of the country, would probably take that direction with which alone he was familiar. I have never seen either of them since. This unpleasant occurrence filled us all with surprise and consternation, and threw a general gloom over our little party, which it required several days to dispel. On the 28th we struck our tents at 8 a.m., and following the course of Bear creek, passing in our progress numerous encampments of emigrants, who had halted for the purpose of recruiting their cattle on the fine high grass which abounded on the banks, we soon arrived at Johnson's rancho; passing which about a mile, we encamped on the creek nearly at the centre of the present reserve. My party having been reduced by Manuel's flight and Kemp's pursuit, I replaced them by hiring two persons at the rancho-the one as cook and laborer, the other as an axeman. On the 29th I commenced the survey of the reserve, running the base line as nearly parallel to the direction of the stream as possible, which gave it the bearing N. 47° E., the perpendicular erected at each extremity having the bearing from the extremities of the base N. 43° W., each line one mile in length, and the base two hundred yards from and parallel to the southeast bank of the creek. This gave the reserve of one square mile, which was situated upon the northwest bank of Bear creek, with the exception of the strip two hundred yards in width upon the other bank, reserved for the purpose of preventing individuals from squatting or settling in the immediate vicinity of the post. Finding the soil to be equally available for gardens and pasturage, Captain Day saw fit to include a quarter mile upon the southeast bank. The lines were accordingly moved this distance to the southeast; preserving, however, their former bearing. I caused stakes to be driven at every furlong, with a board strongly nailed upon each, and legibly marked "United States reserve."15

The variation of the compass I found to be 15° 30' east. We found the heat

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most intense during the mid-day-so much so that I was obliged to conduct the work merely during the morning and evening; but in spite of this precaution my assistant and two employes were taken sick, apparently from the effect of exposure to the sun, and, being confined to their tents for several days, somewhat delayed the completion of the survey. We made observations for the longitude and latitude nearly every day, and found the latitude 39° 2'; longitude by the chronometer, repeated observations, 120° 45'; but I place little faith in this, for the unhappy instrument had been so jolted over the rough roads, and had altered its rates in such a very unexpected and inconsistent manner during the march, that we could place but little reliance upon its accuracy. On the 7th and 8th of October, I made an examination of Bear Creek for about 25 miles from the encampment. On the 9th the weather, which had gradually for two or three days been growing damp and uncomfortable, changed to rain, pouring down in torrents during the night of the 9th, and continuing to rain heavily at intervals during the 10th. Many miners came down from the upper diggings on the creek during these two days, reporting that it was impossible to work on account of the severity of the cold. This sudden change from the excessive heat of the last week struck me as particularly extraordinary, even in this extraordinary country. On the 14th the weather, which had been pleasant from the 10th, although much cooler in the mornings and evenings, again changed, favoring us with a tremendous gale from the northwest, accompanied by squalls of rain, which created great havoc among the tents of our encampment; but again all cleared away pleasant before the morning of the 15th. These unexpected rains were somewhat alarming to us, as, having the main part of our work to execute in the examination of the Sacramento valley, we dreaded that they might prove the immediate precursors of the rainy season, which, if commencing immediately, would have put a sudden termination to our labors. On the morning of the 15th, having finished the survey and made a map of the reservation, which I left with Captain Day for the use of the post, I broke up my encampment at Bear creek and marched north, for the purpose of examining that portion of the valley mentioned in my instructions.

I had previously dispensed with the services of my assistant, which I had found not entirely necessary, and quite inadequate to their expense to the government. We struck our encampment at daylight; but, owing to the many little matters of business necessary to be attended to before leaving, did not get fairly upon the road until 8 a.m. Keeping generally a north by west course, we crossed Dry creek, at a distance of three miles from our encampment. This in winter becomes quite a considerable stream, which, rising in the low hills, flows in a southwesterly direction and empties into Bear creek, about 5 miles below "Johnson's."

We arrived upon the southeast bank of the Feather river, six miles below the junction of the Yuba, at 5 p.m., at a point immediately opposite Sutter's "Hock farm"—here we encamped for the night. This is the most beautiful situation that I have seen in California. The river, which at this place is about

six hundred yards in width, is lined on either bank with majestic sycamores, in a fine grove of which, upon the west bank, is situated Captain Sutter's farmhouse, a remarkably neat adobe building, whitewashed and surrounded by high and well built walls enclosing out-houses, corrals, &c. There are about 100 acres of excellent land enclosed and cultivated upon the west bank, which yields the most astonishing crops of wheat with very little labor. The river is filled with salmon; and we observed two seines drawn across the river, about a mile apart, from which I was informed the occupants of the farm-house obtain a plentiful supply. About 200 yards above the farm-house is situated a rancheria of Indians, some 300 in number. This village consists of about 20 mud ovens, partly above and partly below the ground, with a small hole for egress in the side. They had just commenced the collection for their winter stock of acorns, and had many high baskets, containing probably forty or fifty bushels of this species of provender, standing about. They were mostly naked, and kept up a dismal howling all night as a tribute of respect to one of their number who had departed this life on the day previous. They were suffering much with the prevalent fever, as were the occupants of the farm-house, several of whom were sick at this time. On the 16th two of my party, Hyer and Flint, were seized with the fever. Having administered a prodigious dose of quinine to each, I proceeded to make an examination of the river in each direction from my encampment, which occupied the remainder of the party during the 16th and the 17th.

I determined the latitude of Sutter's farm 39° 2' 14", nearly identical with that of the post at Bear creek; longitude, by chronometer, 121° 14' 45". On the 18th, one of my patients having recovered, I left this beautiful but unhealthy river, having made a bed in the wagon for Hyer, who, although suffering much, refused to be left behind.

We crossed at the lower seine, about one mile below the farm-house, having much trouble in getting up the bank on the west side. The mules refused to pull until, by the assistance of some Indians, the baggage was entirely unpacked, when, by dint of much shouting, screaming, and profanity from the party, they managed to draw the empty wagon to the top. Passing the farm-house to the left, we now entered upon a fine, level prairie, the soil of which was of the richest description, and its surface dotted with the "long-acorn oak" for a distance of two or three miles from the river. We saw many antelopes and deer, but did not succeed in obtaining a shot at them. The Buttes were now in full view, presenting the singular spectacle of a range of mountains from one to two thousand feet in height, and some twelve miles in length, rising from the middle of a broad prairie, and entirely unconnected with any range. Keeping by compass the direction N. 45° W., we travelled on until night-fall, when we arrived within three miles of the spurs of the north Butte. The heat had been intense, and having crossed the prairie without water, we were suffering extremely for the want of it, as were our animals, whose labor in pulling the wagon over the dry and cracked soil, which yielded at every step, had been very

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severe. I therefore caused the party to halt, and sent off three men in different directions to search for water, which they found and reported at the northern extremity of the Butte, to which place we proceeded at once and encamped, about 11 p.m., after a very fatiguing day's march.

The "Buttes," or, as they have generally been termed, the "Three Buttes," have been erroneously represented to be three isolated peaks rising in the prairie. 16 They are in reality a range, containing some twenty peaks, and about twelve miles in length, by five or six in width. The two principal peaks are at the northern and southern extremities—the former 2,483 feet above the plain, the latter 1,841. The northern "Butte" is much the most remarkable. It is of a nearly conical shape, very steep, its summit cropping out with trap rock disposed in every variety of fanciful figures, one of which (the actual summit) is a tall turret-shaped rock fifty-six feet high, and above twelve feet in diameter. The base runs off into five distinct spurs to the north, between each two of which lies a beautiful green valley, watered by streams having their source in never-failing springs about midway up the mountain. The soil is of the richest alluvial deposite, giving no indications of minerals, and the whole range is studded with the holly oak, and thickly inhabited by almost every description of game-bear, antelope, black-tailed deer, cuyotes, and even the panther, or puma, (called the "California lion,") whose roar resounded about our encampment during the night with startling distinctness.¹⁷ We made the latitude of the north "Butte" 39° 12' 32", longitude 121° 28' 36"; of the south, latitude 39° 9′ 32", longitude 121° 29′ 6". It was in one of the little valleys that we encamped, by the side of a beautiful spring of clear, cold water. Here we found many human bones, and the embers of a large fire, in which were the remains of a carpet bag or valise and some plates and cups. We observed, also, a newly made grave in the valley, with a cross placed at its head, on which had been an inscription, but it was now illegible. I succeeded in clambering to the summit of the north "Butte," from which I had an uninterrupted view of forty miles in every direction, observing distinctly the courses of the Sacramento and Feather rivers for at least that distance, and on the right and left the snowy mountains and coast range extending north and south as far as my eye could reach. On the 21st, two or three of my men declined proceeding on account of the day, it being Sunday. I had allowed them while engaged in the survey at Bear creek to rest on this day; but, as they were receiving very high wages for very small equivalents, I did not conceive it necessary to cease from travelling, particularly as I very much doubted their sincerity in the matter. I therefore informed them that I had not the slightest objection to halting every Sunday, but that, as they would do nothing on that day, I should infallibly stop their pay on every occasion of this kind. Upon hearing this their devotional feelings subsided with vast rapidity, and they professed themselves ready to proceed. I had been detained for two days at the "Buttes" by the sickness of two of my little party; but the bracing air of this delightful spot acted upon them like a charm, and by the 22d all were able to move forward.

Taking a westerly direction, we marched across the plain, which was of rich alluvial soil, but cracked and parched by the heat, until we struck Butte creek at a point about twelve miles from its junction with the Sacramento, where we encamped. We saw upon the plain while crossing immense quantities of wild cattle, and a large drove of horses, containing over two hundred. These animals are, I believe, perfectly wild and unclaimed. We found it as difficult to approach them as the antelope and elk, which in some instances we observed feeding with them.

On the 23d and 24th we examined Butte creek, and the valley beyond, contained between it and the Sacramento. This beautiful stream has its rise in the western spurs of the Snowy mountains, 18 and runs south with little variation in its course for some 50 miles, where it makes a wide bend to the west in latitude 39° 9', and empties into the Sacramento. It is in many places of considerable width, but everywhere of great depth, carrying, I should imagine, as much water into the Sacramento as the "Yuba," the principal branch of the Feather river. Near its mouth it widens to about 600 feet, the ground in the vicinity being marshy and covered with tule, and the banks difficult of access on account of the density of the alders and grape-vines with which they are lined. There are many clusters of beautiful trees—oaks, sycamores, and ash upon its banks, but it is not thickly wooded, as is the case with the Sacramento and Feather rivers and their branches. The plain beyond is of rich alluvial soil, covered with fine grass, which was at this time almost dried up, upon which subsisted large herds of wild cattle, horses, elk, and antelope. The "tulé" swamps do not extend far above "Butte creek;" there are but two or three isolated marshes of this description on the west bank of the Sacramento. There are two rancherias of Indians upon this bank, containing probably some 200, male and female. They subsist, like those already noticed, upon fish and wild grapes in the summer, and acorns and pulverized grasshoppers in the winter season, and appeared peaceably enough, but very disgusting to behold, being almost stark-naked and excessively filthy.

Two deputations visited my camp on Butte creek; they behaved very civilly, and received and devoured some biscuit, which I administered to them, with a rapacity quite painful to behold. The men were all armed with bows and arrows, and the women furnished with baskets of a conical shape. I found out by signs that they were on a grape-gathering excursion. We found the creek to be plentifully supplied with a large white or grayish fish, weighing several pounds, and of a kind that I had never seen before. They resembled bass, and were delicious eating.19

On the 25th we marched up the creek about 15 miles, and encamped near the crossing of Lawson's route. The stream here widens into a little bay, about 500 or 600 feet across, very deep, and about a mile in length. We made observations here, as we had done at our last encampment, at which we made latitude 39° 20' 26", longitude 121° 41' 15"; finding latitude 39° 31", longitude 121° 46' 15". This creek was at this place almost literally covered with ducks and brant,

of which we shot many. We made an observation at sunrise for the variation of the compass, which was found to be 16° 49' east; a very large variation, but not as great as at the Buttes, where we found it nearly 18°. I was disposed to attribute this to local causes or attraction, but could find no evidence of iron, or in fact any other mineral, in the soil. We observed this day, as before, numerous herds of cattle and horses, one of which came to water at the creek about sundown, within a few hundred yards of our encampment. We observed comparatively few troublesome insects in this part of the country. Fleas, so annoying in the lower settlements, are here almost entirely unkown. Their troublesome office is, however, disagreeably supplied by an unpleasant-smelling pismire which covers the soil, and by its nocturnal rambles effectually banishes sleep. We left Butte creek on the 26th, and after travelling south of east about 15 miles over the dry and parched prairie, which was cracked in some places to the breadth of six or eight inches, rendering the wheeling extremely laborious, we struck "Lawson's route." This we found an extremely good road, upon which we marched some 12 miles further, passing many emigrant-wagons filled with dirty and unhappy-looking women and unwholesome children, and encamped on the bank of Feather river, six miles above the ford. The eastern valley, between Butte creek and the spurs of the Sierra, is from 30 to 40 miles in width, of rich soil, and covered during the spring and summer with fine grass. It is watered by the Feather river and its branches. This river rises in the Sierra, and flows slightly west of south through the valley, emptying into the Sacramento. It is remarkably straight throughout its whole course, making four small or abrupt bends, and is generally in the same latitude; wider, though not as deep as the Sacramento. Its banks are thickly wooded, for some two miles in depth, throughout its entire extent, with the holly and long-acorn oaks, sycamores, beech, ash, and alder trees. Its general depth during the dry season, or from the last of May until the first of November, is from two to ten feet; and its bed is much obstructed by sand-bars, which, while rendering fording at numerous points perfectly safe and easy, prevents entirely its navigation even by the smallest class of vessels. It is fed by numerous small creeks which run down the ravines of the Sierra, and in whose dry beds during the summer rich deposites of gold have been and still continue to be found, I observed three rancherias of Indians upon its banks within 12 miles of the crossing of "Lawson's route," which may contain in all from 300 to 500. They are all of the same wretched class with those observed upon the Sacramento. They appear perfectly harmless and remarkably good-humored, and many of them are in the employment of the emigrants who have squatted in the vicinity. On the 27th we marched six miles down the Feather river, crossing in about two feet water. A small island in the middle of the stream renders the ford more easy, and would be useful in the construction of a bridge at this point, which the high banks render practicable. We kept the river road for several miles, and then crossed the plain to the "Yuba," nine miles further. This plain is precisely of the same character as the others-unbroken, like them, save by a few ridges of

low hills, and of the same rich alluvial soil. We encamped on the "Yuba," in the vicinity of Rose's rancho, a beautiful site for farming or grazing, but apparently subjected to but little cultivation. We found here a small adobe house, redolent with the odor of whiskey, and festooned with strings of jerked beef. The "Yuba" is a small but rapid stream, flowing southwest from the mountains, and emptying into Feather river. Its bed is rocky, giving its waters a turbulent character, particularly when swollen by the rains or melted snows of the Sierra. Its banks are wooded and not as high as those of Feather river, and it is occasionally subject to overflow. The soil in the immediate vicinity is of the richest description, and in the upper part of the river and its tributary, "Deer creek," the richest deposites of gold have been discovered. Leaving "Rose's rancho," we marched across the plain to Bear creek, striking the road from Noyes's rancho to Johnson's at a distance of about six miles from Rose's. We found Captain Day's command comfortably established at camp "Far West," upon the reserve, and preparations being made for building. We remained here during the 29th and 30th, and made observations for the rate of the chronometer, which, as I had supposed, had changed its rate very much from being jolted in the wagon.

The weather had prevented our making but one lunar observation, from which I established the longitude of the Buttes, and my map is projected from that data. Bear creek is about forty miles in length; it has two branches, which unite about thirty miles from its mouth; its course is nearly straight, as is the case with nearly all the rivers of the valley; and it empties into Feather river, being the second branch of importance in point of size. Its banks are thickly wooded towards its mouth, mostly with shrub-oak, buck-eye, and alder. In the summer it has but little water, but is never entirely dry; in the winter it becomes a deep and rapid stream, overflowing its banks to a very considerable extent. I have been informed that one instance has occurred of individuals going from "Johnson's rancho" to Sutter's fort in a whale-boat, the entire plain, forty-five miles in extent, having been submerged during a freshet; but I do not vouch for the truth of the statement. Leaving camp Far West on the 31st, we travelled down the creek to its mouth, then continued upon the branch of the Feather river until we had arrived within a mile of the town of Vernon (situated at its mouth, and supposed to be the head of navigation upon the Sacramento,) where we encamped. Feather river, near its mouth, is a very broad and beautiful stream. Its banks are heavily timbered, and some fifty feet in height, coming down abruptly to the water. There is a sufficient depth of water as far as the mouth of Bear creek to float any small-size vessel; but the frequent occurrence of extensive sand-bars renders the navigation to this point at present impracticable.

During the night we killed three veritable raccoons, the first that I had ever seen in this country. The town of Vernon is situated at the junction of the Feather and Sacramento rivers, and that of Frémont immediately opposite. Each contains some twenty houses and one or two hundred inhabitants. The valley of the Sacramento, on the western bank of that stream, is for the most

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part a barren plain, with little vegetation or water. It is from thirty to forty-five miles in extent, being bounded on the west by the coast range of mountains. There are no streams emptying into the Sacramento from the west, south of latitude $39\frac{1}{2}^{\circ}$ north, with the exception of "Puta" and Cache creeks. The latter is the outlet of Clear Lake, flowing from its southeast extremity, and losing itself in the "Tulé" swamp which borders the western bank of the Sacramento about six miles southwest of the mouth of the Feather river. "Puta" creek rises in the coast range, and, flowing southeast, empties into the Sacramento about fifteen miles below the mouth of the American river. The whole country between the creeks is liable to overflow, and is very dangerous to attempt travelling after a heavy rain. The "Tulé" swamp, upon the western bank of the Sacramento, extending to the vicinity of "Butte" creek, and occurring occasionally above, is from three to six miles in width, and is impassable for six months out of the year. A corduroy road may, however, be made over it, which has been used in some instances with success at all seasons.

There is a short road of this kind in the rear of Sutter's, which I believe has proved entirely successful.

We reached Sacramento City on the 2d of November, and encamped upon the outskirts during a tremendous storm of wind and rain, which proved to be the bona fide commencement of the rainy season. Having paid and discharged my party with the exception of a teamster and Mr. John Day, whom I retained as assistant, and finding it impossible to sell my animals and wagon to advantage, in consequence of the identical reason that prevented my purchasing (i.e. the expedition for the relief of the suffering emigrants which had just preceded my return, and whose mules and other property were being disposed of at auction), I concluded to take them all to "Pueblo de San Jose," where I had reason to believe they would meet with a ready sale. I accordingly crossed the Sacramento on the 6th, at 2 p.m., and encamped on the verge of the Tulé, being unwilling to run the risk of remaining all night upon the plain beyond. It rained tremendously all night, and we were glad to take the road at daylight in the morning. We crossed the Tulé safely, but found the road beyond extremely heavy and covered in some places with water. These we passed without difficulty, observing to keep carefully in the road, which being packed by travel, was not as dangerous as the plain upon each side. We had arrived within half a mile of "Puta" creek, when I observed with astonishment and alarm that a strong current was setting down the road, and that the water was deepening around us with rapidity. I at once comprehended that the creek had overflowed its banks, and that we were in a dangerous position. I gave the order to the teamster to turn about immediately, but it was too late-the mules sank at once on turning from the road, the wagon was fast blocked in the yielding mud, and the water, as we afterwards found, was gaining on us at the rate of four feet an hour. It was with the utmost exertion and no little danger that we succeeded in getting the mules extricated from the wagon, from which I had already saved my chronometer and best sextant, my drawing instruments and papers. We were

compelled to abandon the wagon, with the remainder of the instruments and all our personal property, and return to Sacramento City, where I disposed of my animals at auction.20 The whole of the valley, I found upon my return, had been made a perfect quagmire by the recent rains, and several wagons had been lost on the same day in the attempt to go to Frémont from Sacramento City. I arrived at Benicia on the 10th of November, from which place I had the honor to send you a detailed report of the loss of my wagon, and other circumstances connected with my expedition. From the above general summary of the journal kept while engaged upon the expedition, and from the accompanying map, an idea may be obtained of the geographical position of that portion of the valley mentioned in my instructions, and, as far as the means of communication, its capability of supplying forage, and its agricultural character are concerned, of its general and military resources. It will be seen that there is no point in this portion of the valley at which a military post can by any possibility be required, that is absolutely free from objection. That already selected combines as many advantages in a military point of view as it is possible to obtain. A position at the north Butte, or upon Butte creek, at some point near the crossing of Lawson's route, would be undoubtedly more pleasant in every respect, perfectly healthy, and would possess every requisite for the comfortable subsistence and shelter of the troops; but beyond the attaining of these points, I can conceive of no advantages to be derived from establishing a post in that vicinity. There would be no inhabitants to protect, and nothing in fact to protect them from. As far as regards building materials, all points are equally eligible. The soil of any portion of the valley mixed with water and chopped grass, and exposed to the sun, makes excellent adobe or sun-dried brick, which is probably more economical, easier of working, and better adapted to the climate, than either timber or stone. Pine timber may, however, be obtained of the best quality upon the table-lands at a distance of about twenty miles from the commencement of the hills; the oak, which forms a greater portion of the timber upon the streams, being too hard and brittle to work easily, and soon decaying when exposed to the weather. Two steam saw-mills are now in process of erection upon Bear creek, about four miles above the newly established post, from which, when in operation, sufficient supplies of pine timber may be obtained.

There are two rancherias of Indians upon the Sacramento, one upon Butte creek, three upon Feather river, and one upon Bear creek (about ten miles above the post,) which have come under my observation. All of these together must contain something under one thousand individuals, men, women, and children. I was informed that upon the Upper Feather and Yuba rivers were some two or three thousand living in the hills, but whether belonging to the same tribe with those of the valley I could not ascertain. All that I have seen appear equally ugly, harmless, and inoffensive; but, being perfectly barbarous, and acting, as I imagine, more from instinct than reason, they are liable to commit, at any moment, some unexpected outrage, for which neither themselves nor any one else can assign a reason. I was informed that the rancheria upon the Sacra-

mento had, within a few months, committed three murders upon white men travelling upon the western bank; I was not able, however, to arrive at any details, and am not satisfied that the report was worthy of credence.

As far as I could ascertain, by inquiry, from those persons most likely to be best acquainted with their character and habits, all of these Indians are to be viewed with suspicion and distrust; and I found it generally conceded that those termed "Christian Indians," who, by their intercourse with the whites, had added to their original qualification of low cunning some gleams of intelligence, were by far the most dangerous, being invariably found to be the ringleaders in all thefts or other outrages committed by a rancheria. Should the present rapid emigration to this country continue during the ensuing year, the entire valley will undoubtedly be thickly settled with a hardy population, who, attracted by the fertile soil and beautiful scenery of the banks of Feather river and its branches, will brave its sickly climate, preferring to reap a sure and lucrative harvest from agricultural pursuits to enduring the hardships, exposure, and sickness of the mines for a doubtful prospect of immediate wealth. In this case the post at Bear creek, instead of being, as now, on the frontier of civilization, would be surrounded by a population perfectly able and willing to help themselves; and it might become advisable to establish a station further to the north, in the valley, or in advance, upon the "Truckee" road, according as either became finally the main route for emigration.

I have the honor to enclose with this memoir a map and copy of the reserve at Bear creek; also, a map and copy of the Sacramento valley, from the American river to the mouth of the Butte creek, which embraces that portion of the country referred to in my instructions.

Trusting that they may meet with the approval of the commanding general, I have the honor to remain, sir, with high respect, your obedient servant,

Geo. H. Derby, Lieutenant Topographical Engineers.

Major E. R. S. Canby, Adj't Gen., Tenth Military Dep't.

NOTES TO LIEUTENANT DERBY'S REPORT ON THE SACRAMENTO VALLEY

¹ Henry Wager Halleck, of New York, was graduated from the U. S. Military Academy in 1839 and was commissioned in the Corps of Engineers. He was breveted captain in 1847. He resigned from the army in 1854, but returned during the Civil War to be major general in 1861 and Commander-in-Chief of the Army 1862-64. He died in 1872. Halleck was an active and prominent figure in California during the period immediately following the American acquisition. He was Secretary of State under Colonel Mason and General Riley; he was a delegate to the constitutional convention of 1849; he was a candidate for United States Senator, but was defeated by Gwin. He attained a prominent position as a lawyer during the fifties, the firm of Halleck, Peachey and Billings being retained in most of the important lawsuits of the period. In 1861 he was commissioned major general of state militia, and from 1864 to 1869 he commanded the military division of the Pacific.

² Edward Richard Sprigg Canby, born in Kentucky, was graduated from the U. S. Military Academy in 1839 and was commissioned in the 2d Infantry. He was breveted lieutenant-colonel for gallant conduct in the Mexican War. In 1849 he held the permanent

³ George Clinton Westcott, of New Jersey, was commissioned second lieutenant in the 2d Infantry in 1838. He was breveted captain in 1847 for gallant and meritorious conduct in

the battle of Chapultepec. He died in 1853.

⁴ Albert S. Miller, of Tennessee, was graduated from the U. S. Military Academy in 1823. He was breveted major in 1846 for gallant and meritorious conduct in the several conflicts at Monterey, Mexico, and in 1848 attained the permanent rank of major in the 2d Infantry. He died in 1852.

⁵ Julius Jesse Backus Kingsbury, of Connecticut, was graduated from the U. S. Military Academy in 1823 and was assigned to the 2d Infantry. He was promoted to captain in 1837, and in 1849 was advanced to major and was transferred to the 6th Infantry. He died

in 1856.

⁶ Bennet Riley, of Maryland, entered the army in 1813 as an ensign of rifles. By 1839 he had advanced to the permanent rank of lieutenant-colonel in the 2d Infantry, and in January 1850 was commissioned colonel of the 1st Infantry. He was breveted colonel in 1840 for bravery in the Florida campaign, brigadier general in 1847 for gallant and meritorious conduct in the battle of Cerro Gordo, and major general in 1847 for gallant conduct at the battle of Contreras. He was civil governor of California, 1849-50, and as such called the constitutional convention at Monterey in October 1849. He returned to the East in 1850 and died in 1853.

7 Sutter, or Sutterville, was the small settlement established in 1846 by John A. Sutter on the Sacramento River three miles below his fort. (Bancroft: *History of California*, 1888, VI, p. 15; "Life in California Before the Gold Rush," by John Bidwell, in *Century Magazine*,

December 1890, XLI:2, pp. 180-181.)

8 Hannibal Day, of Vermont, was graduated from the U. S. Military Academy in 1823 and was assigned to the 2d Infantry. He was promoted to captain in 1838. At the close of

the Civil War he was made brevet brigadier-general. He died in 1891.

9 Sheriff H. A. Schoolcraft was elected Alcalde of Sacramento in 1849. (Thompson and

West: History of Sutter County, 1879.)

10 Nicolaus Altgeier, born in Freiberg, Germany, in 1807, came to America about 1830 and became a trapper for the Hudson's Bay Company. He came to California about 1839 or 1840 and worked for Sutter, who encouraged him to settle at the junction of Bear Creek and Feather River in order that there might be someone there to run a ferry. Sutter deeded to him a square mile of land in 1842. The adobe house was built in 1847. Derby's "time immemorial" was, therefore, not more than seven years. The spot is still called Nicolaus. (Thompson and West: History of Sutter County, 1879, in which the name is given as Allgeier; and Bancroft: History of California, 1888, VI, p. 16, in which the name is given

as Altgeier.)

11 Johnson's Rancho, "one of the richest, most extensive, and beautiful tracts of land in this State, . . . situated on Bear River, thirty-five miles above Sacramento, and fifteen from Marysville," was at this time owned by Eugene Gillespie and Henry E. Robinson. In 1844 Don Pablo Gutierrez, a Mexican, received a grant of five Spanish leagues on the north bank of Bear River. Not long after, he was killed, and on April 28, 1845, his grant was sold at auction (by John A. Sutter as magistrate) to William Johnson and Sebastian Keyser, Johnson taking the east half and Keyser the west. In August, 1849, Gillespie and Robinson obtained possession of Johnson's half, it having in the meantime been deeded to several other purchasers, and in November of that year they also purchased Keyser's half. One of the main "emigrant" roads passed through Johnson's Rancho, and from 1845 on it is mentioned frequently in the narratives of immigrants. A portion of the grant was in 1849 set off as a government reserve, and Camp Far West was there established (see Note 15). The rancho passed into various hands, and was for a time overrun by squatters until, on November 18, 1856, the United States District Court confirmed the Mexican grant in the name of William Johnson, thus perfecting the title. In 1866 the town of Wheatland was laid out on a portion of the grant. (Thompson & West, History of Yuba County, p. 80; Alta California, November 20, 1856.)

12 This spelling of Peter Lassen's name is frequently found in writings of the time and indicates the current pronunciation.

13 Theodore Cordua conducted a stock farm near the site of Marysville.

14 John Rose, a native of Scotland, came to California in 1840. He worked as a shipcarpenter and builder until the discovery of gold, when he went to the mines. In the spring of 1849 he and two others purchased the Nye and Sicard ranch on Yuba River. (Thompson and West: History of Sutter County, 1879.)

15 The post established here was named "Camp Far West." It was occupied for a time by a detachment of the 2d Infantry, under command of Captain Hannibal Day. Log houses were built for barracks and officers' quarters. There was also a log fort. The soldiers, when off duty, frequently engaged in mining on Bear Creek, near camp, sometimes making five or six dollars a day, thus fulfilling Derby's prediction. The post was abandoned in May 1852, when the small remaining detachment of troops set out for the upper Sacramento to establish a post near Cottonwood Creek.

Thompson and West's *History of Sutter County*, 1879, from which these facts are taken quotes a "Centennial Address" by Judge [Philip W.] Keyser, as follows:

"I have mentioned Camp Far West. It was quite an important military post in those days. Pleasantly situated on the bank of Bear river, amid an undulating country that forms the base of the foothills, and which at that time was covered with tall pines and wide-spreading live oaks, the camp was an easy and delightful drive in the spring-time from Nicolaus, while its accomplished officers were the most agreeable and hospitable of hosts to the many visitors to whom they always extended a hearty welcome. Captain (now, I believe, Brigadier-General) Day was the Commander of the Post. My acquaintance with him and his brother officers began before Nicolaus was 'in esse.' How well I remember the day! Charley Fairfax (whom all Californians knew and loved), 'Uncle' Dick Snowden, as we all called him, (he was Fairfax's uncle and the Alcalde of whom I have spoken), a brother of mine and myself were on our way in December, '49, with provisions for the winter, to our log cabin which stood (and I believe yet stands) not far from Nevada [City] and Grass Valley. We built it in October, '49. We were packing our provisions on mules, but were delayed several days by high water. About Christmas Bear river became crossable, and we loaded our pack-train, saddled our riding animals and started. Camp Far West was in existence at this time, and the officers had been invited to partake of a Christmas dinner by Charley Hoyt, at Johnson's Ranch, which was the name of a large tract of land lying upon the northwest bank of Bear river and owned or occupied by Hoyt. There was an adobe house upon the land, standing upon a high, natural mound and surrounded by out-houses and corrals. Hoyt knew some of our party and invited us all to join his military friends at the Christmas dinner."

Captain Day's letter book of Camp Far West during the period from October 16, 1849, to January 7, 1851, is now in the California State Library.

16 "The Marysville Buttes are a cluster of hills about 10 miles in diameter, culminating in South Butte, 2,132 feet above sea level. North Butte has an elevation of 1,863 feet. The central area, about four miles in diameter, is composed of andesite, a lava that was pushed up from the interior of the earth in a molten but stiff condition. Around the andesite is an irregular belt of sandstone and shales of Tertiary age, bent upward by the force of intrusion of the andesite so that they dip away from the center at angles of 18° to 90°. An outer belt, about two miles wide, of tuffaceous breccias, consisting of angular fragments of lava of various sizes with some pebbles of other rocks, surrounds the sandstone and shales. The material of these breccia beds probably once flowed from the crater of the volcano as a thick stony mud. The streams flowing down from the buttes have broad valleys which are filled with alluvium in their lower courses. The hills have an outer slope of 250 feet to the mile and a steeper-in-facing scarp or bluff. A projection of the other slope to the center would restore the outline of the old volcano, making it about 5,000 feet high, or over twice the present height." Diller, J. S., Guidebook of the Western United States, Part D. The Shasta Route and Coast Line (Bulletin of the United States Geological Survey No. 614), Washington, D. C., 1915, p. 75.

¹⁷ There is a controversy among naturalists and hunters over the question of the mountain lion's cry. There are close students of the animal's habits who stoutly maintain that the California lion does not cry out and that the sounds attributed to this animal come from other sources such as the coyote and the owl. Certainly the California lion does not "roar."

18 "Snowy mountains" is a literal translation of the Spanish Sierra Nevada.

¹⁹ This fish was undoubtedly the Sacramento Perch (Archoplites interruptus), which was at that time the only species of the character described to be found in these waters. The bass was not introduced until long afterwards. (Information from Mr. J. H. Vogt, of the Bureau of Fish Culture, California Fish and Game Commission. See also, Jordan and Evermann, Fishes of North America, 1891, p. 991, and Fish and Game, January, 1931, Vol. 17, No. 1.)

²⁰ Documents relating to the loss of property have been brought to light, and, trivial

20 Documents relating to the loss of property have been brought to light, and, trivial though the incident is, it is amusing to follow the story. In the Derby papers in the Engi-

neer Corps archives is the following certificate:

"I hereby certify on honor that on Wednesday, November 7th, 1849, Lieut. G. H. Derby, U. S. Topographical engineers, was unavoidably obliged to abandon the following articles belonging to the Topographical Department in consequence of

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sinking in the mud caused by the sudden overflow of Puta Creek. To Wit: 1 cover'd Waggon, 2 Compasses, 2 Tripods, 2 Chains and pins, 1 Hatchet, 1 Rifle, 1/2 Coil Manilla rope, 1 Sextant.-John Day, Asst., Top. Engineers."

The letter-book of Captain Hannibal Day contains the following:

Camp Far West, Cal., 26, June, 1850

In acknowledging the receipt of your communication of the 3rd inst. relative to a wagon containing some public property and directing its recovery by this Command, I would respectfully submit to the Commanding General of Department that its location is on the west of the Sacramento and on the summer road from Sacramento City to Benicia and I have reason to believe nearer to the latter Post than to this & therefore more easily recoverable from that place.

As to the present value of the instruments, I much doubt if it would remunerate for their transportation even to Benicia—the exposure all winter, I should suppose, would have totally ruined them. I am informed that the "Yuba" Road will not become practicable yet for some weeks and shall therefore wait further instructions on the subject and from the reduced state of my Command too, at present.

After the fair warning which Lt. Derby had last November, as I am informed, of the utter impracticability of that road for his wagon, I should think it no more than right that he be required to recover the said property himself.

Respectfully,

H. DAY, Capt. 2 Inf., Comdg.

Asst. Adjt. General, Hd. Qrs. 10 Mil. Dept., Monterey, Cal.

Lieutenant Derby mentions the recovery in a letter addressed to Colonel Abert, dated from Benicia, September 26, 1850:

"I have the pleasure of reporting the recovery of two sextants; two compasses, and two sets of chains and pins reported by me as lost last November in Puta Creek. They were taken from the wreck of my wagon after the cessation of the rainy season by a neighboring ranchero, from whom they were received by Lieut. [Henry Bascom] Hendershott, 2d. Inf., who has lately sent them to this post from Camp 'Far West,' Bear Creek."