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Letter from the Secretary of War, in answer to a resolution of the House of Representatives of the 6th instant, relative to the routes from the western boundary of Arkansas to Santa Fe and the valley of the Rio Grande.

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ROUTES FROM THE WESTERN BOUNDARY OF ARKANSAS
TO SANTA FE AND THE VALLEY OF THE RIO GRANDE.

LETTER

FROM

THE SECRETARY OF WAR,

IN ANSWER

To a resolution of the House of Representatives of the 6th instant, relative to the routes from the western boundary of Arkansas to Santa Fe and the valley of the Rio Grande.

MAY 16, 1850.

Laid upon the table, and ordered to be printed.

WAR DEPARTMENT,
Washington, April 23, 1850.

SIR: In answer to a resolution of the House of Representatives of the 6th of February last, I transmitted to the House on the 18th of that month all the information then in this department relative to the routes from the western boundary of Arkansas to Santa Fe and the valley of the Rio Grande. I have now the honor to transmit herewith, as connected with the same subject, a report and map recently received by the colonel of the corps of topographical engineers, of a reconnaissance made by Lieutenant Michler, of that corps, of the country between the Red river and the Rio Pecos.

Very respectfully, your obedient servant,

GEO. W. CRAWFORD,
Secretary of War.

Hon. HOWELL COBB,
Speaker of the House of Representatives.

BUREAU OF TOPOGRAPHICAL ENGINEERS,
Washington, April 22, 1850.

SIR: I have the honor to submit to your consideration the report and map of Lieutenant Michler, from the Red river to the Pecos. With a view of giving more interest to the map, I have had added to it other routes in the same direction, previously examined and duly reported by Colonel Johnston.

Respectfully, sir, your obedient servant,

J. J. ABERT,
Colonel Corps Topographical Engineers.

Hon. G. W. CRAWFORD,
Secretary of War.

SAN ANTONIO, *March 10, 1850.*

SIR: I have the honor to transmit herewith a sketch of the reconnaissance between Red river and the Pecos, just completed by Lieutenant Michler, and that officer's report.

This examination enables me to give you positive official information of the fact which I stated to you at the end of the last season, that there is no obstacle to the construction of a road of any sort from the neighborhood of Fulton, Arkansas, to the Pecos, in the direction of El Paso; the remaining part of the route having then been ascertained.

Beginning at or near Fulton, below the route in question, is nearly due west as far as the head of the Sulphur Fork; then crossing the heads of the east fork of Trinity, and taking the direction indicated by the broken pencil line on the sketch, it enters Mr. Michler's road at the angle near the intersection of the one-hundredth meridian and the thirty-third parallel; leaves it again at the ponds in the sand-hills east of the Pecos, taking to that river the course marked by the broken pencil line on the sketch; follows Major Neighbors's route to the pass in the Sierra Hucca, (see map delivered by Captain French, assistant quartermaster,) and strikes the Rio Grande a little north of the northern boundary of Mexico, through one of the two passes in the Organ mountains near the thirty-second parallel. The distance from Fulton to the Rio Grande by this route is about 820 miles.

Lieutenant Michler's course was directed by the information given him by two Delaware Indians, (neither of whom would consent to accompany him,) Black Beaver and Jack Ketchum, the latter highly recommended by Lieutenant Colonel Miles: they agreed (separately) in describing the country between either the Big Wichita, which is the main branch of Red river, or the Brazos, and the Pecos, as an immense impracticable sandy desert, and the route which he took as the most direct one practicable.

The minute examinations which would be made in locating a road, would no doubt enable us to reduce the distance given above by at least fifty miles.

Most respectfully, your obedient servant,

J. E. JOHNSTON.

Colonel J. J. ABERT,
Chief Topographical Engineer.

SAN ANTONIO, TEXAS, *January 28, 1850.*

SIR: Orders, of which I submit the following copy, were received by me at the place and date set forth therein :

SPECIAL ORDERS, }
No. 50. }

HEADQUARTERS EIGHTH DEPARTMENT,
San Antonio, September 11, 1849.

Agreeable to the recommendation contained in the letter of Brevet Lieutenant Colonel Johnston, chief topographical engineer within the eighth department, dated July 12, 1849, Lieutenant Michler, with his party, will proceed to the examination of the route from the upper valley of the south branch of Red river to the Rio Pecos.

Should there be evidences of a serious hostility on the part of the In-

dians, likely to endanger the lives of the party, Lieutenant Michler will retrace his steps, and return to this place for further instructions.

By order of Brevet Major General Brooke:

GEORGE DEAS,
Assistant Adjutant General.

Having proceeded to execute the above instructions, I have now the honor to report their completion, and respectfully furnish the following report of my reconnaissance, together with the accompanying map.

Upon leaving San Antonio, my escort consisted of fourteen men, all civilians. I decided upon taking wagons along as far as possible, as they would afford the best test of the practicability of a road. The nearest post to the point at which my examination was to commence is Fort Washita, in the Indian territory. Apart from the fact of its being a good starting point, from which to commence the survey, it possessed the advantages of enabling me to renew my supplies of provisions, and of refitting out my expedition with animals, or whatever might be needed, before finally getting beyond the reach of the settlements. In consideration of these circumstances, I proceeded first to Fort Washita, the distance being about three hundred and eighty miles. The road travelled was upon the extreme line of settlements, although within the present line of military posts. For the first hundred miles the country has become pretty well settled; for the rest of the way, farms were only met with at the intervals of ten and fifteen miles. With but few exceptions the road was an excellent one throughout. The country was generally a fine grazing one, and well watered; fine bold streams being crossed at short distances. With the exception of post-oak and one or two other varieties of oak, no timber was to be met with except immediately upon the banks of streams. The principal, and I might say the only produce of the farms, is corn; the demand being limited, there is but a small supply, each farmer raising merely sufficient for his own use, and for the few passing travellers. Upon approaching Red river some few fields of cotton were seen. The villages along the road are mostly small, containing perhaps some half dozen dwellings, the latter but poor and indifferent. Even the most trivial comforts are unknown to a greater portion of them. Within a few miles of Red river more signs of industry and care are visible, and you seem transported in a new land. Beyond this last river, among the Chickasaws, you meet with some fine farms, and in all a degree of comfort which does credit to them.

In consequence of some heavy rains, a few slight detentions occurred, but we at length reached Fort Washita in safety. I was here detained for several days after renewing my outfit, by a rise in the False Washita. Constant rumors of Indian hostilities reaching me, I here increased my party, which now numbered twenty-one men. With this escort, and with four wagons loaded with provisions for two months and a half, I was in readiness for a start.

To Captain Marcy, fifth infantry, who had arrived at Washita but two days previous to my setting out, I am indebted for information concerning the country passed over by him, knowing that the route to be pursued by me would, sooner or later, intersect his. He had come from the

Pecos, but had kept south of the Red river until he reached Preston. I attempted to obtain the services of his valuable guide, Black Beaver, a Delaware, but failed, as he had so recently returned from off a long expedition: I consequently had to proceed without a guide. The courses and distances from Fort Washita to the Pecos were accurately taken, and will be found in the notes of the survey.

The Washita river having fallen, we proceeded to cross it, the entire day being occupied in accomplishing the crossing of the wagons. To be better able to impart correct ideas of the country traversed, I shall extract parts from my journal of each day's march.

November 9, 1849.—This morning started from Fort Washita. The first two miles was through the Washita bottom; the soil rich—red clay mixed with sand, being excellent cotton land; the timber cotton-wood, hickory, dogwood, elm, sycamore, and post-oak. The road lay partly on a post-oak ridge, dry, and of a hard sandy nature. The Washita river, where I reached it, was still high, although fordable on horseback. When low, it is even difficult to cross, in consequence of the existence of quicksands in the bed of the river. This stream is about three hundred miles in length, varying in breadth constantly, and about forty yards wide at the ford. It is frequently the cause of the great rise in the Red river; the water is of a bright vermilion color, and its taste brackish. They speak of erecting a bridge across it; the banks are high and favorable for accomplishing it. On the west side the bottom land is about half a mile in width, very dense and thick, and of the same nature. The road then passes over a slightly rolling prairie until it reaches the lower Cross Timbers; to the left are seen the low hills along the Red river, and to the right one continuous prairie, with here and there motts of post-oak. Several creeks were passed, the country seemingly well watered; the timber growing very thick along them. The soil was of a sandy nature throughout the entire distance. The prairie grass was already very dry at this season, the species of gramma being most abundant; here and there spots of mezquite. Saw several varieties of cactus to-day. At the edge of the Cross Timbers we found an unusual formation for this country; upon the slopes of the prairie lay large rocks, all of them sharp and of a slab-like form, set in the ground at angles, edges upright, and all highly fossiliferous, but no common direction given them. The distance from the Washita river to the edge of the Cross Timbers is about nineteen miles encamped on Sandy creek.

November 10 to November 16.—The road for the next eight miles still continued in the lower Cross Timbers. This body of timber commences as far south as the Brazos, and crosses the country in a northeast direction. To pass through it we were compelled to follow old Indian trails, cutting our way wherever the wagons could not pass. Its breadth, by the road, was ten miles. The timber generally grows pretty thick, and upon a sandy soil; post-oak, white oak, Spanish oak, black jack, and other varieties of oak, together with elm, black and white hickory, form the principal growth of the Cross Timbers. The country is rolling throughout their extent; many small creeks traverse them, and fine walnut and sycamore grow upon their banks, and often cedar is found along them. The road laid down on the map as the "Oil Spring road," leads to a spring which its name implies; the oil is said to resemble naphtha, and patients already resort to it for its beneficial effects. The country near

the edge of the Cross Timbers became more rolling, and from the highest points the Red river could be easily seen. The lower are separated from the upper Cross Timbers by a high rolling prairie, fifteen miles in breadth by our course. This prairie is open and entirely destitute of timber; the soil is rich until you again reach the Cross Timbers, when it becomes loose sand. The upper are vastly inferior to the lower, both in kind and quality of timber; the former are composed of nothing but scrubby post-oak. In breadth they are fifteen miles, the main body extending west as far as Mud creek. The banks of the streams traversing them are generally of loose sand, and it is difficult for wagons to cross them; at almost every one of them we were compelled to double teams and cut away the banks, in order to cross them. The water is generally fresh, with the exception of Salt creek. They are subject to frequent and sudden risings, but soon run out. Upon the banks of one of them we were detained an entire day, in consequence of a heavy rain on the night of the 9th. At Walnut bayou, left the road to Warren's trading-post, and followed an old Indian trail to the mouth of Mud creek. The trading-house was broken up a year or two ago, and two or three old Cherokees alone remain at the spot. We have passed several Indian villages, principally belonging to the Caddo and Biluxi tribes; they have settled down to raising corn, and, with their cows and poultry, seem quite domesticated. After cutting our road through the upper Cross Timbers, we reached the Red river, and on the evening of the 15th encamped on its banks, within half a mile of the mouth of Mud creek, and distant sixty-one miles from Fort Washita. The banks of the river were low; the water was falling rapidly; and from the extent of drift, there must have been a severe freshet. Unable to tell the natural bed of the river. There was some fine, large, and heavy timber upon the bank of the river; hackberry, mulberry, cotton-wood, Spanish oak, black jack, and willow, forming the principal growth. The grazing near the river is, however, extremely bad.

November 16 to November 23.—Upon examination of Mud creek, we found that it was impossible to be passed except by bridging it or by rafting. The banks are steep bluffs, and the bed of the stream exceedingly boggy, although not deep. It seems to be back-water from Red river, and from its appearance and quality well deserves the name which it bears. The water is a brackish consistency of clay and water; the timber on it was scarce, and of the same kind as on the main river. In order to be passable at all times, it must be bridged. As the river was constantly falling, we found that, by means of a large sand-bar extending above and below the mouth of the creek, we could at length be able to pass in that manner; fords were found from the sand bar to the shore at both extremities. By thus keeping up the middle of the river on the bar, we managed to get beyond Mud creek after a day's tedious work; in making the trail we very nearly lost two of our mules in the quicksands. The road lay first over a flat prairie for several miles, the river remaining in sight: it then passes over a high rolling prairie, the divide between the Red river and Mud creek—both streams being in view, and running parallel to each other. Within ten miles of again touching the river, the country becomes a perfect dead level. Encamped on the evening of the 22d on the south side of Red river, two miles above the mouth of the Little Wichita, and one hundred and four miles from Fort Washita. Passed two beautiful streams of clear running water, together with several smaller ones,

since leaving Mud creek. To the north of us we could still see traces of the upper Cross Timbers, but no timber immediately along the road excepting in small motts and along the streams. In crossing the latter we always found good fords, being led to them, generally, by Indian trails. The farther west we travelled the better grazing we found; the gramma, sedge and buffalo grass the most abundant, but the mezquite constantly becoming more frequent. By the time we reached this point of Red river, having satisfied myself of its position with respect to the two Wichitas by examinations up and down the river, I found that the water had considerably fallen and was now at a fordable depth. After remaining upon its north bank one day, to recruit my animals and to seek a ford, a second day was occupied in crossing it. The same difficulty arose from quicksands as before, and it was only by dividing up the loads into several, and crossing portions at a time, that we could get across. At this point there seem to have been several bottoms, descending high bluff banks from the first to the second, and each successive one a few feet lower than the preceding. In leaving the channel of the river, you first come upon a sand flat, the bed of the river in high water, with nothing upon it but large quantities of drift; then the first bottom land of the river, containing rich alluvial soil, sand mixed with red clay, and timbered along the edge near the flat with young cotton-wood and willow. This bottom bears evidence of being frequently overflowed. Then comes the second, separated from the first generally by a steep bluff bank, the latter intersected by gullies and ravines, impassable at most places for wagons; high sand-hills are found on the edge of this bottom. At the foot of the bluffs are fine springs and lakes, well timbered, and good grass along them. This bottom is also subject to overflow. The river was then rapidly falling from a high freshet; but notwithstanding, it was filled with sand-bars, and but small and narrow channels for the water to pass. At the ford the breadth of the first bottom from bluff to bluff was about a mile and a half; that of the river bed at any ordinary rise of the water, half a mile; and that of the regular channel about a hundred yards; the depth of the water about two feet and a half. At most points the channel was much narrower, but too deep for a ford. It was impossible to cross immediately at the mouth of the Little Wichita. Thus far the country has been well adapted to a road; the Cross Timbers and large bends in the river have caused our route to be somewhat tortuous, but with time, and a small working party, a perfectly straight road could be made. It has been watered at convenient points, the water mostly fresh, with the exception of Red river, which is a brackish red stream.

My instructions, as stated in the letter of recommendation referred to, were to commence the examination at the mouth of the Little Wichita, and at this point I had now arrived.

November 23 to December 4.—On the morning of the 23d of November we left the Red river, a most uninteresting one to the gaze, presenting nothing pleasing to look upon. On the evening of December 4 encamped upon the main fork of the Brazos; the distance from the former to the latter about ninety-six miles. The route for this entire distance lay upon the divide between the Big and Little Wichitas, with the exception of the last ten miles, which crossed the divide between the Wichita and the Brazos. It passes over a slightly rolling prairie, with intervals for miles of perfect dead-level flats. A more beautiful country for roads of any kind

cannot be found. Near the Red river the soil is slightly sandy, and you meet with some few post-oak mts. It then becomes a fine mezquite country, well timbered with mezquite, and for miles perfectly level; and even when a rolling prairie, the elevations and depressions are small. The grass at first is principally gramma, and the ordinary sedge and other species; but then becomes the fine, curly mezquite, and the winter mezquite. The whole extent was well watered by numerous branches of the two Wichitas. The country appeared to have been flooded by previous heavy rains, and numerous water-holes were met at short intervals. Most of the streams possessed a slightly brackish taste; all of them were well timbered.

The Big Wichita, I have been informed, rises in the old Wichita mountains; it is much larger, and rises much farther west than any of the other branches of Red river. Upon leaving the divide and approaching it, the ground is exceedingly rough and uneven; deep gullies had been washed through the clay and sand, and numerous small mounds had been formed by the swift currents during the high freshets to which this stream must be subject. From the amount of drift scattered about, it must rise to a very great height, and its current become remarkably swift. On this side the banks were high sand-bluffs; but on the opposite they were much lower, and a gradual descent to the edge of the water. Its breadth is about thirty yards, and depth only a few feet, with no very strong current. The water is of the same color as that of the Red river, and tasted very brackish and bitter. Young cotton-wood seems to be the only timber which grows along it. Within a few yards of its banks you find many lakes or ponds, the water of which is much more agreeable to the taste. The Indian name for this stream is "Ah-ha-we-wo nah:" translated into English, it signifies "Pond creek." The Little Wichita heads within six miles of the waters of the main fork of the Brazos; the Trinity heading up against both of these streams, and but a few miles from both. The divide between the two Wichitas is also very narrow at the same point, the two being separated from each other by about eight miles. The first stream is about one hundred and twenty-five or thirty miles in length; its breadth, at different points at which I saw it, varied from ten to fifteen yards; its depth was but a few feet, and its bottom very boggy. The bottom land is about a hundred yards in width, and heavily timbered with elm, hackberry, and cotton-wood. A strip of land about a mile in width along this stream presents a peculiar appearance, and has been subject to some powerful influence; deep gullies, low ridges, innumerable small mounds and hillocks of every conceivable shape, thrown together without order or arrangement, present to the eye quite a contrast to the central portion of the divide. The soil is here a reddish sandy clay; limestone is found lying about, and the ground is covered with gravel. The whole is the result of heavy rains, and the freshets which have been occasioned by them. They all can be avoided by continuing upon the divide; the distance is thus slightly increased, but the road would be almost perfectly level, and no labor would be required. The clearness of the water of the Little Wichita forms a striking contrast to that of the larger Wichita; it is a clear running stream, although the water tasted very slightly brackish. Almost the entire distance from the Red river the two Wichitas were constantly in sight, and could easily be traced by the lines of timber along them.

Crossing the divide of the Brazos, you travel over a continuation of the mezquite range, and come across the Brazos without the slightest indication of its presence. No timber along its banks as far as the eye can see; you stumble upon it without any forewarning. High bluff banks along its very edge conceal it, until you reach the top of them. Its channel is about fifty yards in width, and bounded but by a small strip of bottom land. We easily found a ford which we were enabled to cross without labor, its depth being about two feet. Owing to its red sandy bottom, the water has a reddish appearance, though clear and free from mud. The Indians call this stream the Colorado, and much more deservedly than the one bearing that name on the map of Texas. The water is exceedingly brackish; small streams of fresh water are found emptying into it, which will serve every purpose. In the bottom was good grazing of sedge and water-grass, and on top of the bluffs again spread out the mezquite flats. Near the Red river the formation seemed to be sandstone; but on the Brazos we found some beautiful limestone—the bluffs were white with the large limestone rocks which lay strewn over their surface. Laid by on the 3d to recruit my mules. Since leaving Red river we have met with several tribes of Indians—Shawnees, Delawares, Tongues, &c., &c. The Comanches and Tongues were united in chasing the buffalo above the Big Wichita; they allowed us to pass unmolested. During the last few days of November we had some extremely cold weather, and our animals suffered severely; the grass became deadened by frosts, and contained but little nourishment.

December 4 to December 16.—On rising the bluffs of the main fork of the Brazos, we again found a continuation of the mezquite flats, over which we travelled until we reached the head of the Double Mountain Fork of the Brazos. Day after day the country was almost perfectly level; one exception alone can be made, a distance of four or five miles over some high sand-hills, perfectly destitute of grass and covered with low scrub-oak; the rest was either mezquite flats or a very slightly rolling mezquite country—the distance from the Brazos one hundred and eighteen miles. The whole country was well watered by branches of the Double Mountain Fork and the Clear Fork of the Brazos; the only distance without water of any length was twenty miles. There was but little timber upon these streams upon first leaving the main fork, but the farther we advanced the more we found, elm being the principal growth. The whole country was well timbered with mezquite, but most of it had been killed by prairie fires. The general course of the Double Mountain Fork is northeast, both this stream and the main fork running very nearly parallel. As its waters are fresh, and heading at the same time near the waters of the Colorado, it possesses much greater advantages than the main fork for the purposes of travel. It is a fine clear stream, although of no great width; at many places it runs with a swift current, although frequently standing in large holes or lakes, and in these places exceedingly deep. It has a gravel bottom, and in a few places a hard limestone bottom. The banks are generally high, the prairie extending to the edge of them.

At a distance of forty-five miles from the Brazos we first struck Captain Marcy's trail, and then commenced to follow it. About seventy miles from the Brazos, the country, which had hitherto been very mountainous, began to assume some new features. High mounds and low ridges of hills came

in sight and presented a new scene. The road, however, left them most to our right, and they continued to extend to the head of the Double Mountain Fork. They offer not the slightest objection to the road, our wagons passing along without any trouble or work. They are low, and scarcely bear the name of a hill, except in comparison with the level country about them. They are a succession of spurs or oblong mounds overlapping each other, separated by deep ravines and gullies. Upon ascending them you see some distance in advance of you two high peaks, forming prominent land-marks, and near the head of the Double Mountain Fork, from which this fork derives its name. They continue constantly in sight, and your course is directed towards them. Limestone abounds upon these hills; the live oak and cedar are first seen upon them. A second range parallel to the first is seen at some distance farther off; a low country intervenes between them, and appears to be the basin of the main fork. During this interval of time we suffered most severely from cold northers, heavy rains and terrible sleets. Our mules had already become very weak in consequence of living upon grass alone, the latter having lost most of its nourishment from the killing frosts which night after night lay upon the ground. The cold affected the rest, and nine of our animals were either frozen to death or left so stiff with cold that we were unable to move them. Our loss would have been greater, had not the men divided their blankets with their animals, and built immense fires to protect them as much as possible from the cold. We found it necessary to change the party from mounted men to footmen, and replace the wagon mules by saddle mules. The commencement of the winter setting in so severely, we knew not what might come to pass ere we returned to the settlements.

December 16 to December 23.—Upon leaving the head of the Double Mountain Fork, we commenced crossing the divide separating the waters of the Brazos from those of the Colorado, a distance of about eight miles. The country here undergoes a complete change: you now meet with high rolling prairies, arid and destitute of timber, and scarcely any grass but of the most miserable kind. Occasionally you cross low sand-hills, containing some low cedar and scrubby oak. This country extends to the "Big Springs of Colorado;" these latter distant from the head of the Double Mountain Fork about fifty-six miles. Several fine branches of the Colorado were crossed, the largest of which was the Salt Fork. With the exception of the latter, they were all streams of fresh water; their banks were high, but they were all of no great width. On the 21st we encamped at the "Big Springs of the Colorado," and remained there the following day to rest our animals. These springs are very large, and a considerable quantity of water is obtained from them; they cover a space of about twenty feet square, and in some places the water is fifteen feet in depth by measurement. They are walled in by a ledge of high rocks, forming a concave surface, within which the basin of the spring lies. The water is impregnated with lime, and is cool, fresh, and perfectly clear. It is carried away in a bold running stream, which, in a short distance, sinks below the surface. The rocks which line the water are a conglomerate limestone, formed by numerous shells united by a natural cement, the character of which is silicious. The surface of the ground around is covered with angular pieces of limestone. High mounds and hills surround the springs. The soil is chiefly sand; the grass is poor;

no timber but young mezquite and cedar; some scrubby elm borders the stream. This spot has been a favorite place for the camping-grounds of Indians; numerous large well beaten trails lead from it in different directions.

December 23 to December 31.—On the morning of the 23d we left the "Big Springs;" our road now lay over a high arid plain, perfectly destitute of timber, scarcely even a sprig of mezquite except in the neighborhood of water-holes. For miles the country would be a perfect level, and then a slightly rolling prairie; it seemed destitute of all growth of any kind, and nothing to be seen upon it excepting the antelope and wolf, and prairie-dog town. The grass was scattering and miserably poor; occasionally a small spot of mezquite was found. This continued until the commencement of low sand hills, a distance from the "Big Springs" of about seventy-six miles. At the distance of twenty-one miles were the "Mustang Springs." There was nothing to indicate their presence; a few scattering chapparal bushes were growing within a half mile of them, but in proximity to the water there were no trees or bushes of any kind. A low prairie of about a hundred acres in extent—in form very nearly circular—and bounded by low bluffs, composed principally of white limestone, contains several small ponds of water; one or two pretty deep, and the rest not containing much water. The taste of the water is flat and sweet, being slightly brackish. From the number of trails leading to them, and the number of mustangs which came to water there, and the quantity of flag and other vegetable matter growing in and about them, I judge the water to be permanent. Several springs were found bubbling up in the ponds.

Upon reaching the sand-hills we found for the first twelve miles low ridges of sand, running parallel to each other; plains of the same kind interspersed between them, with small hillocks. The sand was here of a black color. Then come the white sand-hills, which are really objects of curiosity. They are a perfect miniature Alps of sand—the latter perfectly white and clear. In the midst of them you see summit after summit spreading out in every direction—not a sign of vegetation upon them—nothing but sand piled on sand. They form a belt two or three miles in width, and extend many miles in a northwest direction. But a matter of the greatest surprise is to find large water-holes among them. They are found at the base of the hills; are large, deep, and contain most excellent water—cool, clear, and pleasant. The water is permanent. A great deal of vegetable matter and young willow trees are found on their banks. This was the first water we had found since leaving the "Mustang Springs"—a distance of sixty-seven miles without any. During this entire distance, we saw no indications of any whatever. Instead of going above the sand-hills, we crossed them, following a large Indian trail over them; and then taking up our course, we reached the Pecos in twenty-two miles. The first two miles was over the sand-hills; and a difficult undertaking it was to cross our wagons. The country was then a slightly rolling prairie—a hard sandy soil. A thick growth of chapparal extended from the sand-hills to the bottom land of the Pecos; the grass was indifferent, and the soil poor and unproductive. A low ridge bounded the bottom land, the latter being about a mile wide where we struck the Pecos. The course of the stream was nearly east and west; its width was about forty feet; and being too deep to ford, we encamped on

its left bank. It answered well the description given me by others, and was truly a "rolling mass of red mud;" nothing to indicate its presence but a line of high reeds growing upon its banks. Along its banks you find numerous lakes, the water of which is clear, but still more brackish than even that of the river. On December 30 we reached the Pecos, the point at which our reconnaissance was to end—a distance of four hundred and ninety-two miles from Fort Washita. From this examination we may conclude that, for the distance passed over, a more advantageous country for roads of any kind cannot be found; for hundreds of miles almost a perfect level—well watered (the greater portion) and well timbered. It stands unrivalled by any other portions of Texas that I have seen. The sand-hills and the scarcity of wood and water from the "Big Springs" to the Pecos, form the only objection. We carried wagons with us throughout the entire distance without the slightest difficulty. The grass is mostly the fine curly mezquite, the best for grazing purposes. No hills or mountains to form any obstacle, and no work to make a road required. The whole country is entirely different from what it was represented to be by persons who boasted of their knowledge of this part of Texas, showing that not the slightest reliance can be placed upon their statements.

December 31, 1849, to January 24, 1850.—As it was difficult to cross the Pecos, in order to strike the road to El Paso, I determined to continue down the left bank until I reached the Horse-head crossing, and then follow the road into San Antonio. Our route continued in the Pecos bottom, following the general course of the stream; the bottom was solid and made a good road, and was perfectly straight. Low ridges bound the bottom until near the crossing, the width of the bottom varying on this side of the Pecos from a mile to only a few yards. At any stage of the weather a good road can be found along the foot of the ridge. The distance from where we struck the Pecos to the Horse-head crossing was about forty miles. During the march down the Pecos we had a snow-storm, and we again lost two mules. In consequence of these losses we have been compelled to leave behind two of our wagons; by occasionally replacing the wagon mules by saddle mules, we still managed to get along pretty well. We travelled into San Antonio, for the greater distance, by the same route which Lieutenant Bryan pursued in going to El Paso. His report will be sufficient to give all the necessary information concerning it. From the Pecos to the head springs of the Concho, a distance of sixty-eight miles, we found no water. Leaving the Concho at the point he first struck it, we followed the emigrant road by the head of the San Saba. On leaving the Concho, the road runs over a high rolling country; the only peculiarities of it were the numerous mounds which were scattered on our right and left, generally of a spherical form, varying in size and at unequal distances from each other, their sides covered with loose stone and low brush. The country was hilly, and large rocks lay strewn about. The soil has been a hard, gravel one—its only recommendation that of making a good road. The first nineteen miles we found plenty of water; but for the next forty-five miles, until you reach the valley San Saba, there is none to be relied upon. On reaching the San Saba we travelled down the valley of the stream for thirty-five miles; it is a beautiful mezquite valley, perfectly level, and varying in width from a mile to a few hundred yards, and surrounded by high bluffs.

On leaving the San Saba we crossed the divide separating it from the Llano; this portion of the country was much like that ere reaching the San Saba, but not quite so rugged. Descending from the divide, we followed the valley of Honey creek, one of the branches of the Llano, until we again came into Lieutenant Bryan's road, about sixteen miles from the crossing of the Llano; then continued along it until we reached San Antonio. The distance from the Horse-head crossing, on the Pecos, to San Antonio, by this route, was three hundred and forty-six miles. We arrived at this place on the 28th of January, having travelled a distance, since leaving it, of nearly thirteen hundred miles.

Very respectfully, your obedient servant,

N. MICHLER, JR.,

Brevet 2d Lieutenant Topographical Engineers.

To Brevet Col. J. E. JOHNSTON.