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Exploring Desert Stone

Steven K. Madsen

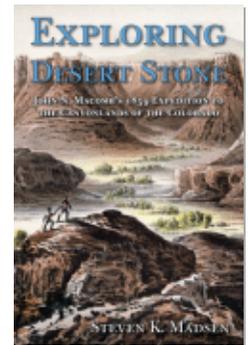
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TOPOGRAPHICAL MEMOIR OF CHARLES H. DIMMOCK

Terby Barnes found this important manuscript in the Rodgers Family Papers on a research trip in 1984 to Washington, D.C. She subsequently transcribed the document and shared it with me. (A typescript of her transcription can be found in the holdings of the Utah State Historical Society, Salt Lake City.) In 2007 I visited the Manuscript Division of the Library of Congress and made my own copy and transcription of the file, published here.

Dimmock wrote the 23–page manuscript on legal-sized paper, possibly supplied from the law firm in Maryland where he worked. In April 1860, Macomb “ran over to ‘Balt[imore]’ and ...transacted my business with Mr. Dimmock.” Macomb possibly obtained the document from him at that time. More likely, he picked up the 1860 manuscript map drawn by both men, now located in the Cartographic Division of the National Archives in Washington, D.C.

Why Macomb failed to enter Dimmock’s topographical data in his report of the San Juan Exploring Expedition is open to speculation. One reason might be that Dimmock later joined the Confederacy in the Civil War which Macomb would have considered treasonous.

From the Library of Congress, Washington, D.C.

Topographical Memoir of the route traversed by the
"San Juan Exploring Expedition" from Abiquiu, New
Mexico to the junction of the Grand & Green Rivers,
Utah; and the return by way of the San Juan River to
Santa Fé, New Mexico.

Between Santa Fé—the rendezvous and starting point of the Expedition & Abiquiu, the distance and topographical features were so fully known, that it was deemed Superfluous to begin the notes of the exploration, until after leaving the latter place.

In the immediate vicinity of Abiquiu, and Camp 4 of the Expedition, the Rio Chama passes along the base of the Southern bluff enclosing it, leaving a valley of about one mile in width stretching across to the Trap dikes & sandstone bluffs on the north. The magical variety of outline & shape to be seen in the Sandstone formations around Abiquiu—from a distorted Titan, to the minute vagaries of a Chinese's fancy; from the castellated towers of architecture run mad, to the shadowy trceries of a Fairy's home—must lead every traveller through that strange region to wander awhile from the beaten trail. Above Abiquiu for 5 miles, beginning nearly opposite the village, the bluffs contract the valley of the Chama to a width of about half a mile. At this point the country opens, the bluffs receding to right and left, and the trail diverging runs parallel with the stream—Some 6 miles to north thereof—until the 21st mile from Camp 4 is reached. From this divergence the trail passes over an open country, gently sloping to the left, and enters the valley of the Arroyo Seco, a tributary of the Chama. At Camp 5—the 15th mile—the bluffs on the right come closely down upon the Arroyo, & are high, steep and rugged. A few miles beyond the stream becomes shut in on the left, and between these bluffs—footing against each other—the trail reaches Camp 6, at the Ojo del Navajo, where, as at Camp 5, there is found good water. Leaving the Arroyo on the right, the trail from Camp 6 follows a small stream, tributary thereto, for 3 miles—to its head—and rising upon a gently undulating Sage plain, with low hills on either hand, crosses a divide, at whose western foot heads the Cebolla, another tributary of the Chama. On the Cebolla, at the 36th mile, the Old Spanish trail, thus far travelled, is diverged from, and the line to Camp 7. on the Rio Nutria, passes over a Sage plain with low hills to right and left as before. Crossing the Rio Nutria—a small stream—the trail ascends a ridge, from whence can be seen a range of mountains some 40 miles to the right and Mt. Gallinas 8 miles to the left, and following a valley running at right angles to the Nutria, crosses—at the 47th mile—the ridge dividing it from the Rio Chama to which it is tributary. Descending the ridge for 2 miles, whose

western slope is finely wooded, the Rio Chama is again met & crossed to Camp 8. The Rio at this point is about 50 feet wide, clear & pebbly-bottomed, with an average depth of 2 feet. Upon its bank some twenty distinct varieties of flowers, mingled in wildest profusion, were found, whose various & brilliant tintings mirrored by the stream gave a effect of rare beauty, heightened by a contrast with the sterility around. From Camp 8 a ridge, forming the western slope of the stream, is passed over & for 5 miles the trail traverses an undulating country, shut-in on the left by a line of ragged, unconnected mesas, varying from one to three miles in distance from the line; and bounded on the right by a gently descending ridge. The ridge on the right turns north at the 55th mile, & about 5 miles distant in that direction, is a high rocky bluff, while some 25 miles still farther north can be seen a range of mountains. Passing on, the line of broken mesas continues on the right & the rocky bluff upon the left until they converge at Camp 9 on the Laguna de los Cabellos. A depression in the pass, formed by the convergence of these bluffs is the recipient of rains shed from a considerable expanse of country, producing the Laguna, one mile in length and averaging about half a mile in width. Beyond the pass the bluffs subsiding recede in easy ascents and continuing for about three miles are substituted by a high & rocky mesa on the left and a steep line of slope on the right. Between these the trail passes over a succession of low summits into a well timbered valley leading to the * Nutria del Navajoe (* Nutria seems synonymous with our term of Creek, and is always an important stream.); and crossing it & a broken, arid country beyond reaches the Rio del Navajoe & Camp 10 at the 77th mile. The Navajoe here is about 30 feet in width and 2 feet average depth. Running parallel with, and a mile south of a tributary of the Navajoe, the trail traverses a series of small ridges—generally the spurs of higher ones on either side—& passes over a high rolling country to the head of a rapidly descending valley, from where the San Juan mountains, apparently ten miles distant to the north, are seen; and following down this valley—densely wooded & with a number of Superb specimens of the Silver Fir—the Rito Blanco is gained & crossed at the 88th mile. Of about the same dimensions as the Navajoe, the Rito Blanco rapidly passes, in a dirty white stream, between high, rocky & picturesque bluffs, deeply gorged by tributary Nutrias. Along its northern bank for 2 ½ miles, to Camp 11, the trail passes, when diverging therefrom it encounters gentle undulations, passing between high broken ridges—through whose gaps the San Juan Mountains continue visible about 15 miles to north—and reaches the valley of the Rio San Juan at the 97th mile. For 1 ½ miles along its northern bank the trail passes before crossing to Camp 12. The Rio San Juan, before the entrance of its large tributaries—fed alone by the rains

and melting snows upon the mountains north—is about 100 feet wide & 2 ½ feet average depth. Its valley, here green & flower-gemmed opens a vista through which the lofty & volcanic pile of the San Juan Mountains are seen, umber-tinted & gloomy; their needled peaks of trappen rocks; courting the lightening in the clouds above them, spread eternal shadows over the exhaustless snows sleeping in their chasms. Across the stream from Camp 12 & a little above—in the flowery plain midway between the Rio & the bluff—is the Pagosa, a hot spring, surrounded by a natural—crater-like, mound, circumscribing it to an irregular figure about 50 feet long by 40 feet wide. Lifting the water from an unfathomable opening, and impregnating it with chemical virtues, the escaping gases give an appearance of active ebullition, & imparting a heat between 140° & 150° Farenheit,* (* The testing Thermometer registering only 140° was found inadequate; the column filling the entire vacuum.) rise in a vapory column, visible for many miles. The flow from the Spring is subterranean until its immediate junction with the San Juan.

Deflecting from the Rio San Juan the trail, bearing westerly, mounts an undulating table-land. At the 104th mile a high ridge can be seen 10 miles to right, and a little in advance the Nutria del Francais—flowing into the Rio Piedra—is reached, down which the line continues, passing Camp 13, to the 116th mile. Shut in by elevated, Rocky, slopes, this stream winds through a narrow but fertile valley much the resort of neighbouring Indian tribes[.] From the point stated in this valley the trail crosses to the head of the Nurtia del Piedra and passing north of the Piedra Parada—the lone stern sentinel of ages, gurading the solitude of the hill-top—descends to the Rio Piedra. Following up the Piedra for about one mile the trail crosses to Camp 14 near the 123rd mile. Begirt by lofty ridges this stream will average in width 75 feet and in depth 2 feet. Entering the Piedra near, and to south of, Camp 14 is the Nutria de las Casas passing in a narrow gorge between steep bluffs. Up this the trail winds to its head spring & crossing a very elevated ridge pursues a tributary of the Rio los Pinos, through a miserably sterile country to within two miles of that stream, where the tributary turning South, it and the Nutria de los Pinos is crossed, & one and a half miles farther on the Rio los Pinos to Camp 15 near the 141st mile. Four miles East of the crossing of the los Pinos the Tunicha Mountains can be seen, far to the South west, and a high ridge 10 miles to north. At the crossing the Sierra la Plata appears 30 miles in advance, 10° west of north. Where the trail crosses the Rio los Pinos, the Stream is divided by an island—a quarter of a mile wide by about 2 miles in length—into two branches of 75 feet average width & 2 feet depth. With a bottom whitened by Sand & pebbles, the Rio los Pinos flows in a

clear Stream between lofty pines Shading the most delicate trout abounding in its waters. Mounting the high-land west of the Stream a valley is followed to the 147th mile, when the trail turns more South & crossing a low ridge—from where high-land can be seen about 20 miles to left—passes over the Rio Florido to Camp 16. From Camp 16, at the 150th mile, a high ridge—bearing parallel with the trail—appears 10 miles north.—The Rio Florido, about 25 feet wide & 2 feet deep, is clear and trout-filled. Passing from the stream to the table-land beyond, the line strikes the old Spanish trail, two miles from the Florido, & continues on it, running parallel with the distant high ground to left. Striking upon the head of a ravine the trail follows down to the Rio las Animas. The ridge on the north converging forms one slope of the ravine & turning becomes the bluff bank of the river. In width the las Animas is 175 feet & 2 ½ feet average depth, Very clear & fish-abounding. Leaving Camp 17, at the 157th mile, the mesa bounding the western Side of the valley, & 250 feet above the stream is climbed & passed over into a broken valley, shut in on the left by a high barren ridge & on the right by gentle slopes. From this the trail traverses a succession of small spurs and mounting by an easy ascent to a well-timbered table-land—from where the country, on either side, seems much broken—continues on the same to the valley of the Rio la Plata. After descending from the Mesa the northern bank of the stream is pursued to about the 170th mile, & Camp 18. Flowing between the spurs of the Sierra la Plata on the north—from whence it springs—and the Mesa Verde on the South, this little stream, 20 feet in width, has “its line cast in pleasant places.” Just at hand, presiding over the beauties at their base, towers that majestic cluster of peaks forming the Sierra la Plata. Lifted from waving grasses & countless flowers of the valley, vainly the eye peers among naked, hopeless crags for some gleaming of that metal the name of the Sierra indicates; until heavy and wearied it sinks in the conviction that the steel-clad Hidalgo must have seen with an eye of faith, strengthened by avarice, the inaccessible hoard deep buried in the bowels of the grand old mountain. A short distance in advance of Camp 18 the trail crosses the Rio la Plata & following along the foot of Mesa Verde passes the base of the Sierra la Plata, over low mountain spurs. Near the 181st mile quite a high divide is passed with elevated bluffs on the left—the mountain having turned north being some 8 miles distant—and the trail approaches the Rio los Mancos in a valley between gentle slopes. Some 3 miles distant from Camp 19 at the crossing of the Eastern branch of the los Mancos, the Mesa Verde is still seen to south & the spurs of the Sierra la Plata upon the north. Converging one mile to left of the trail, the two branches of the los Mancos are distant from each other, at their crossings about half a mile. Heading in the Sierra la Plata these streams

are exceedingly clear, affording trout in abundance. In width the two branches average, respectively, about 20 feet & are 2 feet deep. Over broken ridges making down from the high land north, the trail continues from the Rio los Mancos for some 12 miles, running nearly parallel to a broad valley on the left, sweeping up to the Mesa Verde, now about 8 miles distant. Near here the Orejas [*sic*] del Oso & the Sierra Abajo, to north of them, are visible. Turning somewhat north, at the head of a ravine entering the Cañon of the Nutria del Dolores, the trail descends to Camp 20 on the bank of that stream, at the 198th mile. From the rocky cañon of the Nutria the line ascends at once to the mesa South of it and passing in view of the cañon—as it approaches & diverges in its sinuosities—of the Mesa Verde & the Sierra la Laté—about 15 miles to the Southwest—reaches the cañon of the Rio Dolores at the 202nd mile. Up the cañon of this stream, bearing from the north East for many miles, there is a view remarkable for the mingling of sterile, grandeur with verdant beauty. At this point the stream turns north-west & the trail descends to it, and Camp 21, a mile beyond. The Rio Dolores sparkling & clear, 70 feet in width, flowing in a rapid shallow & winding stream, through flowery meadows & rich green Cotton-woods, bending in leafy exuberance, seems but illy named, as too fair a scene for one to “come to grief.” Rising from it however—leaving the stream uncrossed on the right. Ruins mark the summit of the mesa up which the trail passes, indicating from their great apparent age that centuries must have passed since from amid crumbling walls the voice of sorrow trembled through the valley. Over a gently broken sage plain, spreading far to the right, interspersed with stunted piñons, the trail passes. A broad valley on the left extending to the Mesa Verde—now bearing off to the South—continues to the foot of the Sierra la Laté. Near the 213th mile the line passes Camp 22—the Saronaro [*sic*]—near the head of a small cañon, the site of old & extensive ruins, & crossing, continues upon a plain reaching to high ground on the right, 15 miles distant, & to left for about the same extent. From this plain an uninterrupted view is gained of the Sierras la Plata, San Miguel, [*sic*] la Sol [*sic*], Abajo, le Laté & Orejas del Oso. Falling into a rocky cañon about the 223rd mile, the trail passes through it for 3 miles, when mounting its steep side & leaving it on the left, another cañon, half a mile beyond, is taken & followed between rocky walls, from its head to Camp 23—at the Tierra Blanco. Leaving the cañon at the 230th mile—one mile from Camp 23—the trail again strikes a sage plain bounded by high ground about 15 miles to the right & stretching an indefinite distance to the left. A broad valley is seen on the right 6 miles distant & at the 242nd mile a rocky cañon close on the left into which the trail enters for a short distance & passing from it crosses another three miles beyond, approaching the Juajolote

and Camp 24, at the 246½th mile. From the Juajolote—a cañon slimy with water-lizards—the trail passes up a ravine, with occasional rocky projections, to its head & traverses the interminable sage plain; contracted in some measure by a stunted growth of wood on both sides, three miles distant from the trail. About the 251st mile the country 10 miles to right appears elevated and the plain being passed over becomes undulating; this continues—the lines of wood having terminated—to the 256th mile at the cañon of the Ojo del Cueba & Camp 25. The trail here crosses the left branch of the Cañon del Cueba and is again upon the Sage plain broken by occasional depressions. Passing at the 259th mile a rocky cañon, three miles to north the trail descends a tributary of it & rises at its head a mile beyond. Meeting a deep, precipitous chasm the line descends along its rocky southern slope to the valley of the Cañon de la Pañitas, contracted by almost perpendicular walls—some 600 feet in height—to a width varying from a half to a quarter of a mile & continues past Camp 26—where in the cliff to north, Saurian fossils of exceeding interest were exhumed—with most inadequate implements—by the indefatigable ardor of an enthusiastic & accomplished Geologist* (*Dr. John S. Newberry)—down the cañon to the 270th mile where the line hugs the foot of the wall on the north, that on the South receding & the country in that direction becoming exceedingly broken. Along the foot of the north wall the trail follows until it turns to the north-East—near the 274th mile—falling back as the southern bluff of a cañon leading from that direction. On the northern side of a subordinate cañon, at the mouth of the one mentioned, Camp 27 at the El Tenejal, near the 275th mile, is passed. Around the country appears an intricate mass of irregular bluffs, detached buttes & Sinuous cañons. From Camp 27 the trail crosses a number of ravines leading into a principal one on the left, passed over about the 279th mile, & slowly diverged from—& encounters four tributary cañons, with their intervening ridges, before entering, at right angles to its course, the almost inaccessible cañon of the Ojo verde, debouching upon the leading one two miles to the right. At the Ojo verde a line of bluffs, seen six or eight miles to north along the trail from Camp 27, turns towards the Sierra la Sal some 17 miles distant, and a red Sandstone butte of considerable eminence, two miles to the South, marks with distinctness the cañon from Camp 27. Passing from Camp 28, the Ojo verde & the 286th mile, the trail at once ascends the side of the cañon reaching a rolling, elevated ridge, from where a valley six miles to right is visible, continues by a red sandstone bluff, 2 miles to left at the 289th mile, and a butte of the same formation close on the left a little in advance, to the perpendicular side of a cañon bearing nearly east & west. To accomplish a descent of some 600 feet, to the valley beneath, the trail turns somewhat north of East & winding

around the intricacies of the bluff, by a path the trembling mule hesitates to pursue, follows up the side, slowly descending from ledge to ledge, for $3\frac{1}{2}$ miles, ultimately reaching the bottom of the gorge. It may be proper to state that this descent is deemed impracticable for a train of packed mules & that the train with the military escort were left at Camp 28, and a small armed party of nine pushed on to seek the junction of the Grand & Green Rivers. Down the cañon averaging a half a mile in width—gradually opening as its mouth is approached—the line passes; the walls on either side increasing in altitude until towering, with perpendicular faces, they rise from one thousand to twelve hundred feet above the valley. Turning south at the 303rd mile the wall on the left recedes towards the Sierra Abajo, & in its place, as the trail advances, a wild of fantastic mesas & isolated buttes extend apparently for 10 miles to the left eroded into pyramids near whom the greatest of Gizeh would be dwarfed & castled by basaltic towers grander than that of Babel. Upon the right the perpendicular face of the cañon, broken by deep recesses & rounded projections, diverges gradually to the North, turning near the 307th mile—where it is 3 miles distant from the trail—abruptly in that direction.

Entering among detached piles of sandstone at the head of the Cañon Colorado, soon forming continuous walls from 400 to 600 feet high—broken by the entrance [*sic*] of side cañons—the trail winds through its devious mazes passing Camp 29,—crossing Labyrinth Creek, flowing through the narrow gorge, one hundred & twenty seven times in 16 miles—to the 321 $\frac{1}{2}$ th mile. From here to the junction of the cañon with that of Grand River—distant by an air line $2\frac{1}{4}$ miles—the perpendicular breaks in the bottom of the gorge, preclude the passibility of any farther advance.

The summit of a columnar sandstone pile, lifted high above the top of the left wall of the cañon & about two miles distant from the point of interruption, was ascended with much difficulty, and from it the turbid stream of the Grand River—twelve to fifteen hundred feet below—was visible; passing in devious & contorted course between sandstone walls,—from one thousand to twelve hundred feet in height, whose pilastered faces, in light & shadow, through all the changes of the sandstone series, from deepest red to lightest yellow, presented an appearance wonderful in the beauty of its originality. Across the chasm of the Grand River, over a country deeply serrated by cañons penetrating in all directions, whose valleys the rays of a meridian sun alone can reach, & whose intricacies can be only seen by the bird or the aeronaut, the cañon of the Green River, “opes its ponderous & sandstone jaws.” To the left of the point of observation some 4 miles the junction of the two streams is represented to take place by a Ute chief whose intelligence, activity & ugliness, blended with

the lore of his native soil—as evidence by his person would seem all the attributes necessary for an amateur topographer to whom credence should be duly given. South of the stand point described, many miles distant, the barren plain, arid and trembling from intensity of heat, is covered by mesas broken into isolated pinnacles & clustered castled summits, so architectural in effect that among spires, turrets & battlements the eye seems wandering over the ruined glories of a heavened [*sic*]-burned city. The total distance from Abiquiu to the Grand River, by the route just described, closely approximates $323 \frac{3}{4}$ miles; & from Santa Fé $375 \frac{3}{4}$ miles.

Returning to Camp 27— $47 \frac{1}{2}$ miles from the Grand River, from which to Santa Fé the distances will be marked—the trail turns from that camp a little east of south & crossing several low hills, enters a Valley interspersed with sandstone buttes, having a line of broken bluffs on the right & the high wall, which has turned South from the Cañon de las Pañitas, on the left. Up this Valley to near its head the trail passes, when ascending the high ground on the right, Camp 30 at the Cold Spring—between the walls of a small cañon terminating just ahead—is reached, 62 miles from Grand River. Bearing south, the line passes to a table-land, gently broken, & crossing several ravines, leading down from the Sierra Abajo, runs parallel with a broad valley six miles to left. Near the 67th mile the Sierras Abajo, le Laté, la Plata, San Miguel [*sic*] & la Sal are all to be seen. The trail descends a gentle slope at the 70th mile & crossing Cherry Creek to Camp 31, from which the Sierra Abajo is about 8 miles distant to west. Low spurs of the Abajo, terminating in a broad valley on the left, 5 miles distant, forming occasional rocky cañons, the trail encounters until at the 78th mile it enters a small valley, along which it passes, for one mile, to Camp 32 at the Mormon Spring. Passing on the same broken country continues to the 91st mile where old ruins mark the summit of a sage plain which gently descends to the Cañon of the Ojo del Alamo, when at the 94th mile, the trail crosses the cañon to Camp 33. The country now becomes much broken on the right; and on the left, at the 98th mile a broad cañon is seen, 2 miles distant, which the line approaching descends to by means of a spur transverse to its course, and passes between its walls—200 feet in height—to the 106th mile; at which point the left wall of the cañon turns South East. Within a quarter of a mile of the western wall the trail, bearing a little west of south, continues to about the 108th mile where the wall on the west recedes, that on the East being 4 miles distant, with rounded hills intervening. Just beyond is the cañon of the Ritito del Sierra Abajo, whose stream is descended to down a steep bluff and Camp 34, near the 109th mile, is reached. Along & near the left margin, the line follows the stream, crossing a tributary of it between the 111th & 112th

miles, where the Ritito bearing off to the right, the trail passes over the spurs from the mesas wall on the left & descending a broken ledge at the 115th mile again approaches the stream along which it continues, crossing it twice, to near its junction with the Rio San Juan; here the trail turns east entering the valley of the River to Camp 35, near the 120th mile. The cañon of the Ritito del Sierra Abajo is about 2 miles wide, much broken & enclosed by irregular rocky slopes. The Rio San Juan, at Camp 35, flows in a rapid muddy stream about 350 feet wide, bearing a little south of west. Its valley here, one mile wide, is enclosed by a rocky wall varying from 50 to 100 feet in height. Turning up its valley the trail runs near the northern wall, the stream close against that on the South. On either hand isolated mesas are seen beyond, and high raised above the walls of the stream; from one of which an extended view was gained of the far-distant country. At the 123rd mile the river leaves the bluff and approaches the trail, receding again at the 125th mile near where Gothic Creek enters on the farther bank of the Stream. Through a cañon on the left, a small stream crosses the trail at the 127th mile. From here to the 129th mile the stream is against the right wall which now terminates in gentle Slopes. An isolated mesa is to be seen at this point, 8 miles distant, across the Stream. Still along the foot of the northern wall the trail, passes to near the 132nd mile where it diverges to Camp 36 close on the stream. Along the left side of the valley the line passes from Camp 36, occasionally crossing the points projecting from the second plateau of the stream. Over the river the country becomes much broken by high isolated mesas & nearer the stream by irregular bluffs. Exceedingly sinuous in its course the river approaches and recedes from the trail, which following the left margin of the valley, passes ruins of obvious antiquity at the 140th mile, & traversing the foot of bluffs jutting down from the left, Camp 37, near the 146th mile, is passed close under the northern bluff, against which the stream flows. Climbing along the face of the bluff from Camp 37 the trail is again, 2 miles beyond, forced to travel a narrow ledge between the bluff & the stream. Upon the left the walls become high & steep and the country over the stream continues extremely broken. A bluff footing in the river is passed with difficulty at the 159th mile to Camp 38, opposite which, on the Southern bank of the stream, an extensive ruin presents itself. From Camp 38 the trail leaves the river and ascends a cañon, running North-East, to the high land above the valley over which it passes, with the river from one to two miles on the right, to near the 162nd mile, when descending a bluff, the valley & stream of the Rio los Mancos is crossed, the trail again ascending to the elevated plain beyond. The Rio los Mancos enters the San Juan one and a half miles to right of the trail, & from want of tributaries or evaporation has a volume scarcely larger than when seen at the

former crossing. Within 2 miles of the river the trail continues for three miles approaching & descending to its valley about the 167th mile. Beyond the Stream the bluffs appear more regular & the plain above them less uneven, reaching back to the base of the Cariso [*sic*] Mountains, which with the Tunicha [*sic*] are not far distant. For one mile the line passes along a bluff, which the river twice strikes in its curvings & mounting again the plateau above, runs parallel with, & three miles distant from, a mesa on the left—which terminates at the 172nd mile—& with the river about 2 miles on the right, to which the trail falls near the 172nd mile. The country to south of the river is much broken by ragged mesas. To Camp 39, at the 174th mile, the trail follows, for one mile, the bluff of the stream & then nears its margin. On the summit of the bluff swept by the river, at the 173rd mile, a Fortification, crescent-shaped, defending the accessible approach, marks the point as some last desperate stand of a people advanced in civilization, long since obliterated by the savage hords [*sic*] around. The trail, from Camp 39, continues in the valley of the river to the 178th mile, where rising a spur to the high ground on the north, it descends, near the 180th mile, again to the immediate valley of the stream. A long line of irregular mesas are visible a little back of this point some 8 miles distant to the left. Midway between the broken slopes—one & a half miles north—& the river the trail keeps the valley to near the 184th mile when it is forced by the stream to mount the bluff near whose edge it follows to Camp 40, at the 188th mile, where the river receding permits the trail to descend. At or near Camp 40 the nearest and best view is obtained of the *Ship (*this is a peak in the Navajo Country called “the Needles”), bearing S. 35° W. & distant by triangulation 11.6 miles. This remarkable feature visible from beyond the crossing of the los Mancos—26 miles back—deserves a passing notice. Ejected from the long low mesa upon which it rests to a height of 1600 feet, standing alone, this mass of reddish brown trap, with its two spires & buttressed walls, requires no effort of the imagination, as seen from Camp 40, to distort it into a grander old Cathedral than Christendom contains. Its finialed spires, lit by the evening sun, when the plain at the base is lost in the gloaming, seems bearing the mark of divine approbation—a shrine where assembled nations might bow, forgetful in emotions evoked by its presence, of the petty schisms dividing the world. Seen in the distance at midday, looming from its reflected image in the mirage, the fitness of its title is apparent—a phantom ship mirror’d upon a trembling sea. Leaving the river from Camp 40 the trail passes between it and the slope on the north, crossing a projection therefrom—whence is seen a trap dike across the river, about 15 miles distant—and in Sight of a high mesa, 10 miles to left, approaches a line of volcanic upheaval at the 195th mile; along which it follows about

one mile south—to near the 198th mile where the river breaks through the upturned Strata, which continues across the stream. Here the trail passes around the bluff—it receding to the left—and comes again upon the river at Camp 41 & the 201st mile. Diverging from the stream—divided here by an island—the line passes parallel with it—one mile distant therefrom—& crossing over a projection from the left, is near the river at the 205th mile. The character of the region across the stream continues much the same—the bluffs of varying heights, from 50 to 200 feet, Surmounted by occasional isolated mesas. Passing the 205th mile the line is left by the stream—the bluffs on the north moderate, & a river is passed at the 208th mile, crossing points projecting from the left, the line passes in view of a high mesa wall, 10 miles to north of the 214th mile, & reaches the Rio la Plata near the 215th mile. As with the Mancos the la Plata has here but an inconsiderable increase over its upper stream & empties into the San Juan about half a mile from the trail. From the la Plata the trail passes the point of a rounded hill on the left & follows the valley of the San Juan, to near the 218th mile, to Camp 42 on the Rio las Animas, whose junction is effected with the San Juan one mile to South. In this vicinity are the almost obliterated remnants of an extensive settlement, the abode—as indicated by dim traces of acequias—of an agricultural people. Following up the Las Animas—whose valley is here wide & cultivatable—for a short distance, the trail crosses the stream increased by the confluence of the Rio Florido above to a width of about 250 feet and an average depth of 3 feet—and continues up the valley of the San Juan. From the eastern bank of the las Animas the last view is gained of the Ship, now 38 miles distant. The valley of the San Juan becoming broader the slopes on the north are less abrupt, while those across the steam are high & broken. At the 226th mile the river is 2 miles South of the trail, which passes near the Casa de Montezuma—an old, well-preserved cobble stone building—at the 229th mile. Opposite here the Arroyo Chaco enters from the South, through a mass of whitish yellow mesas—and the trail strikes the river again at Camp 43, one mile beyond. The trail leaving Camp 43 passes within a mile of the stream, crossing at the 237th mile a point of bluff, against which the river flows, and rising from the valley, at the 239th mile, traverses the second plateau for 2 miles, & again descending reaches Camp 44 near the 242nd mile. Across the stream, on the East, Cañon Largo opens upon the valley of the San Juan & the bluffs near & around it are elevated & broken. After careful & extended explorations a practicable crossing of the San Juan—here bearing but little east of north—was discovered, one mile down the stream from Camp 44, where the force of its current is broken by several small islands. The average width of the river at this point of its course is about 250 feet and its depth 3 ½ feet; at the ford however, spread

by the islands mentioned, its width is greater. Crossing the San Juan with no inconsiderable difficulty & danger, the trail ascends a hill South of Cañon Largo & crossing the spurs breaking from the lofty bluffs, 2 miles to the right, gradually enters the valley of the cañon. From where the line enters to Camp 45, near the 251st mile, the valley broken by small ridges—is about 2 miles wide from bluff to bluff. At Camp 45 Cañon Blanco enters on the right, & beyond the trail finds the valley of Cañon Largo less undulating, with walls from five to eight hundred feet high. Passing up the Cañon its walls—broken by the entrance of side cañons—gradually decrease in elevation & narrow the valley—at Camp 46, near the 264th mile, to about one mile in width; the walls having an altitude of between three & four hundred feet. Still in the cañon the trail continues—which has narrowed at the 271st mile to a width of half a mile with walls not exceeding 150 feet in height—passing Camp 47 near the 278th mile—the cañon continuing to contract & the walls, about 75 feet high, are surmounted by masses of broken rock. To its head, near the 284th mile, the cañon narrowing to about one quarter of a mile in width is bounded by rock covered slopes. Beyond, the country opens, the line mounting upon a rolling tableland from where, at the 286th mile, a line of low broken mesas are visible on the right and a cañon one mile to the left, receding from the trail. Over gentle undulations from the ridge to north, the trail passes still in view of the mesas on the right—which terminate about the 288th mile—& descends an easy slope, with a valley two miles to the right and a ridge about three miles north, to the 291st mile & Camp 48, at El alto del a Utah. From the hill just descended a high broken mesa is seen some 15 miles to right. El alto del a Utah, across the valley, North-east from Camp 48, is a considerable hill, from whose rocky summit the Navajoes have hurled to sudden death their Ute captives. Leaving Camp 48 the trail bears directly for the Sierra Nacimiento—30 miles distant, & first visible from near this point—passing up a broad valley, with openings on the ridges enclosing it on either hand, to the 295th mile, where, close on the right, a high ledge of rocks, occupying the centre of the valley, becomes at the 298th mile subsiden [*sic*] to its gentle Southern Slope. To Camp 49—at the Cañada de las alimas, near the 306th mile—the valley is bounded by low hills & preserves a width of about one mile. Continuing, the trail—near the 311th mile—enters between high broken bluffs, whose convergence about the 314th mile—forms the divide between the waters of the Pacific & the Gulf of Mexico. Over this the line passes to Camp 50, six miles from the summit of the Sierra Nacimiento & 316 miles from the Grand River. From Camp 50 the trail changes its general direction, passing parallel with the Nacimiento—and 3 to 4 miles from its base—over the undulations incident to the vicinity, & crossing two tributaries of the

Rio Puerco, passes Camp 51, at the 328th mile. Continuing as before, somewhat East of South, two more branches of the Puerco are crossed within the next 3 miles, & a third near the 331st mile, where three deserted Mexican houses crown the hill on the left. A high mesa on the west of the Puerco terminates near the 334th mile & is 5 miles to right of the trail. Another tributary of the Puerco is passed near the 336th mile & the line from there to Camp 52 encounters a succession of small ridges. Upon the left the mountain is about 4 miles distant & on the right the country is broken by small mesas. The trail from Camp 52, near the 342nd mile, is along the left of a tributary of the Puerco, passing down its valley, with mountain spurs on the east & a broken mesa on the west, to the 346th mile, where the stream turns south, towards the Cabazon—now visible—and the trail reaches Camp 53, near the 354th mile, over a rolling country; the mountain still on the left and on the right a mesa trending towards the Cabazon. The San Mateo mountain is seen from this vicinity far to the south west; while, shaped like a round-topped Sombrero, the Cabazon is 13 miles from, & its summit 1311 feet above Camp 53. One mile beyond the last tributary of the Puerco, heading in the Nacimiento, is crossed, and to near the 358th mile, the line passes parallel with the mountain, 4 miles distant from its foot. Here turning nearly east the trail enters among its spurs—Some of which are purely of alabaster—& rises by means of them to a low crossing of the Nacimiento, which still extends some 8 miles to South. From the Summit, at the 362nd mile to the foot of a bluff, near the 369th mile, the descent from the mountain terminates, the line crossing the Rio Jemez, at the 371st mile, reaches Camp 54 just beyond. Leaving Camp 54 the line passes through the Pueblo of Jemez & over a broken country—with high bluffs from the Vias on the left & a valley to right—crosses a rocky spur, near the 381st mile & over low ridges reaches a valley up which it passes from the 387th to about the 391st mile, when encountering a spur, it rises, to descend again at the 392nd mile, and follows a cañon—opening upon the valley of the Rio Grande—to the 394th mile—its termination—reaching Camp 55 on the bank the Rio, one mile beyond. The lofty [S]andia and the range of the Placers are visible from about the 383rd mile & continue so, with but few intermissions, to Santa Fé; the high mountains back of that place becoming the land-mark towards which the trail is directed. Nearly opposite the Pueblo of Santo Domingo the Rio Grande is crossed—being some 300 feet in width & 4 feet average depth—and the line, passing through the Pueblo, mounts the mesa at the 399th mile, continuing on its level Surface, with high ground about 8 miles to the left, to the 403rd mile, when crossing the Rio de Santa Fé, a high mesa, cañoned by the Rio, is climbed and the trail advances to the 410th mile. To this point from the 406th mile, conical hills



Charles Dimmock Papers, Special Collections Research Center, College of William and Mary

Sketch of “the Needles,” or Ship Rock, by Charles H. Dimmock

are near at hand on the right, & low elevations on the left; while from the 409th mile high Symmetrical buttes appear 16 miles to right, beyond which are the Placers about 20 miles distant. The Rio de Santa Fé, having passed to the right of the trail since its first crossing, is descended to down the rocky Mesa’s side, at the 410th mile & followed one mile below to Camp 56. Crossing the Rio from Camp, the line passes up its valley. The stream departing from the trail to a distance of 4 miles, approaches it again at the 418th mile. One mile on Agua Frio is passed & the trail reaches Santa Fé along the Rio, whose Slopes on the right are gentle & those to left steeper & more elevated.

The distance from Grand River to Santa Fé is about 424 miles.

Respectfully submitted
 Chas. H. Dimmock
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 of the “San Juan Exploring Expedition”

To
 Capt. J. N. Macomb
 Corps of Topographical Engineers U.S. Army
 Commanding San Juan Expedition
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