

1540-1861

MAPPING

the Transmississippi

WEST

By Carl I. Wheat

Volume One

The Spanish *Entrada* to the
Louisiana Purchase

1540-1804


San Francisco

The Institute of Historical Cartography

1957

Of this first volume of Carl I. Wheat's account of the mapping of America's Transmississippi West, one thousand copies—designed by Edwin and Robert Grabborn of San Francisco—have been printed by the Grabborn Press for The Institute of Historical Cartography. The type, known as Van Dijck, was designed for the English Monotype Company by Jan van Kripen after a Dutch original of about 1640, and has here been set (in its 16-point size) under the personal supervision of Edwin Grabborn by Mackenzie & Harris, Inc., of San Francisco, sole users of this typeface in the United States. The map reproductions have been executed by Charles R. Wood and Associates, also of San Francisco. The paper is natural wove Curtis rag.

Four additional volumes are projected for the completed work.

COPYRIGHT 1957 BY CARL I. WHEAT

FURTHER SPANISH MAPPING

BERNARDO DE MIERA'S MAPS OF THE 1776
ESCALANTE EXPEDITION

THE OPENING OF A LAND ROUTE from Mexico to Alta California was for many years a prime objective of Spanish policy. Threatened incursions into the border provinces by Frenchmen from the Mississippi Basin, attempts by Russians to establish colonies on the north Pacific coast, and projected efforts by British mariners to explore that coast and perchance reap the rich harvest of furs it offered—all these combined to persuade José de Gálvez, Visitador-General, and Antonio María Bucareli y Ursúa, Viceroy of New Spain, to support various proposals for the discovery of an overland road to Monterey Bay. After 1762, when Spain succeeded France in Louisiana, fear of French encroachments subsided, and the Serra-Portolá expedition of 1769 made a beginning toward securing the California coast. The need to support and to supply the new and exceedingly feeble Alta California establishments, however, and to forestall settlements by others along the north Pacific coast, continued to move Spain to somewhat desultory action. The successful Anza expeditions of 1775-1776 provided the first cartographic fruits of these efforts, and in 1776 another try—unsuccessful, to be sure, in its announced purpose to reach Monterey by land, but magnificent in and of itself—resulted in the farthest piercing of the “northern mystery” that had yet been undertaken or that would be accomplished until four decades later, when Lewis and Clark traversed the wilderness much farther north to reach the Western Sea by way of the

Miera's Escalante Expedition Maps

Columbia. One result of this 1776 Spanish effort to discover a land route to Monterey north and west of New Mexico was a map which even today compels our admiration.

The story of the expedition of Fray Francisco Atanasio¹ Dominguez, his colleague Fray Silvestre Vélez de Escalante,² and their party of ten, including Bernardo de Miera y Pacheco, cartographer and military engineer, from New Mexico across the wilderness of the upper Colorado River basin to Utah Valley and back by way of the celebrated "Crossing of the Fathers" has been told and retold.³ Father Escalante, then stationed at Zuñi, had already visited the land of the Hopis (called "Moquis" by the Spaniards), and he had come firmly to believe that a practicable land route from New Mexico to California could be found. He thought that, because of the inhospitable topography just west of Hopiland, he would have to go far to the north before he could head west, but he was aware of expeditions that had already pushed north from Santa Fe as far as the Gunnison River in present Colorado. Beyond that would be unknown territory.

The Dominguez-Escalante party started from Santa Fe on July 29,

¹It was spelled "Atanacio" on the map.

²Father Dominguez was the senior of the two, and it was he who "directed" Father Escalante, then only 25 years old, to come from his station at Zuñi to join the party headed for the wilderness. It was Escalante's journal, however, that from the start enjoyed public attention, and the expedition has for many years been commonly termed that of Escalante. For interesting background and sidelights on this remarkable team, see Eleanor B. Adams and Fray Angelico Chavez (ed's.), *The Missions of New Mexico, A Description by Fray Francisco Atanasio Dominguez* (Albuquerque, University of New Mexico Press, 1956).

³The most complete account of the Escalante expedition is that of the late Herbert E. Bolton, entitled *Pageant in the Wilderness*, published by the Utah State Historical Society in 1950 (as Vol. 18 of its *Quarterly*, and also in bound form). That Society has also published numerous other articles on the subject. See J. Cecil Alter, "Father Escalante's Map," and Herbert S. Auerbach, "Father Escalante's Route," *ibid.*, Vol. 9, Nos. 1 and 2, January-April, 1941; "Father Escalante's Itinerary," *ibid.*, Vol. 9, Nos. 3 and 4, July-October, 1941, and "Father Escalante's Journal," *ibid.*, Vol. 11 (four combined issues), 1943.

Dr. Bolton spent many years studying the documents and actually following much of Escalante's trail, and long before publishing his account of the entire expedition he wrote an interesting article, with a detailed map, on "Escalante in Dixie and the Arizona Strip" (*New Mexico Historical Review*, Vol. 3, No. 1, January 1928, pp. 41-72). A translation of Escalante's Journal was also published in W. R. Harris, *The Catholic Church in Utah* (Salt Lake City, 1909). Much earlier, H. H. Bancroft dealt at length with the Escalante expedition, and a partial bibliography of the subject is to be found in the *Utah Historical Quarterly*, Vol. 9, pp. 60-62. An early study of Escalante's route, by Philip Harry of the U. S. Army's Corps of Topographical Engineers (with a sketch-map purporting to show the route), was published as Appendix R, pp. 489-495, with Captain J. H. Simpson's *Report of Explorations across the Great Basin of the Territory of Utah . . . in 1859* (Washington, 1876).

Mapping the Transmississippi West

1776. Although they did not reach Monterey, they did explore a vast expanse of hitherto unknown territory, and although they did not see the Great Salt Lake, they heard of it from Indians who lived near their farthest camp on the shores of Utah Lake. And after they returned to Santa Fe on January 2, 1777, Captain de Miera sat himself down and drew a map that made cartographic history.⁴

For more than a century this map remained unpublished, though a few cartographers—notably Baron von Humboldt—seem to have had access to it in some form and to have made use of the information it records. From the outset, however, until quite recently, Miera's own map seems either to have been unknown, or—if known—to have been ignored, and only in the past few years have reproductions of certain of the several forms in which it was produced in manuscript become publicly available. This is to be regretted, for scholars would have profited greatly had they had contemporary access to this truly epochal map.

Many years ago the Library of Congress obtained several tracings and photostats of Miera's map, and other copies have been secured, over the years, for other collections. Some have even been reproduced—usually with undisclosed emendations—but at no time has anyone seemed to make any effort to consider or explain this map's several forms or to trace the peregrinations of its various copies. It may therefore prove of value

⁴The name "de Miera" will here, for convenience, be shortened to "Miera," as has been done with "de Anza" and "de Escalante." Only a few exceptions to this practice will be noted in this study—such as the use of "de Smet" for the capable Jesuit priest who did so much, a few decades after de Miera, for the enhancement of topographic knowledge far to the north of the Spanish borderlands. To shorten his name now to "Smet" would be to introduce a new and unrecognized name into the history of the West.

⁵Even when reproduced, such maps remain elusive, for the caption "from an old map"—or the like—is often found in otherwise excellent studies, although it hardly ever suffices to meet the demands of scholarship. Indeed, it seems passing strange that many otherwise competent historical authorities frequently deem it unnecessary to give either the location or the provenance of the maps they reproduce. The result (especially when—as here—several distinct copies are involved) is the type of utter confusion that for some time has surrounded Miera's great map. It is particularly regrettable that Bolton failed to define the location of the map he reproduced—with changes—but it has finally been determined that it was the Mexico City copy of what is here termed "Type C" of Miera's map. The problem of the maps Mr. Auerbach purportedly reproduced has proved even more baffling. Incidentally, it is interesting to note that the use of Miera data by Baron von Humboldt (see Chapter VII) stemmed from the inclusion of Miera's material by the engineers Costansó and Mascarò on their maps (as also outlined in Chapter VII). In this connection see C. Gregory Crampton and Gloria G. Griffen, "The San Buenaventura, Mythical River of the West" (*The Pacific Historical Review*, XXV, No. 2, May, 1956, pp. 163–171, at p. 168).

Miera's Escalante Expedition Maps

to attempt to develop some semblance of order out of the chaos in which this matter has been left by previous investigators.

First, a word respecting Miera himself and the officials mentioned on various copies of his Escalante expedition map. A letter addressed by him to the King of Spain after the party returned to Santa Fe discloses that he was no mere untutored provincial.⁶ He stated the frontier problem cogently, and he urged the establishment of at least three settlements and presidios, one in the Valle de Timpanogos (not far south of where Salt Lake City later rose), another on the San Juan River (his Rio de Nabajó), and a third at the junction of the Gila and the Colorado (later the site of Yuma). These three strong points, thought he, should be sufficient to assure to Spain the successful control of its vast northern frontier in America. It seems a pity that the Spanish King was too busy elsewhere to heed either the pleadings of Father Escalante or this sound advice from the engineer Miera.

In another letter Miera recounted that in 1743 he came from his Spanish birthplace to El Paso del Rio del Norte (the present Ciudad Juarez, Mexico, across the Rio Grande from the modern city of El Paso); that thereafter he conducted five campaigns against hostile Indians, and that he later removed to Santa Fe, becoming Alcalde and Captain of the frontier of Pecos and Galisteo, where he campaigned against the Comanches. He even journeyed to the Hopi country at the Governor's behest, and he seems to have drawn a map of that and the Navajo country, later preparing a general map of the Interior Provinces, which he says was sent to Nicolás Lafora, whose maps have already been noted. After again serving as an Alcalde, Miera joined the Dominguez-Escalante party and on its return to Santa Fe prepared the official map of the expedition.⁷

⁶This letter, dated at San Felipe El Real de Chiguagua, October 26, 1777, is reprinted in Bolton's *Pageant in the Wilderness* (pp. 243-250). Miera's 1773 map of a stretch of the Rio Grande above El Paso has been considered in the preceding chapter.

⁷This second letter is reprinted (without date) in the *Utah Historical Quarterly*, Vol. 11, 1943, at pp. 120-122. In it Miera concludes that for all the services he had rendered to his King "without compensation," he craved a Captaincy or the command of the New Mexico militia, or some other suitable position, together with promotion of his son, Anacleto, to some "official rank." Apparently these appeals went unanswered. Except for his excellent mapping of New Mexico in 1779, discussed in the next chapter, nothing further has been heard of his valuable work. The maps mentioned by Miera in his letter have not been discovered. Fray Angelico Chavez, *Origins of New Mexico*

Mapping the Transmississippi West

On this remarkable map, Escalante's route is shown in detail, with names or symbols marking each camping place. The group went past Abiquiu and thence northwest, past present-day Durango, Colorado, thence along the Dolores River and east across the Uncompahgre Plateau, past the site of Delta, and on north and northwest to cross the upper Colorado River near present-day De Beque, above Grand Junction. Near this point Miera noted that the mountains to the east were the "spine" of North America. The party then veered northwest and crossed the Green River, which Escalante called the Río de S. Buena-ventura,⁸ not far from the present town of Jensen, Utah. Thence the route lay west up the Duchesne River, on to Strawberry Valley, and finally through the Wasatch Mountains to some Indian villages on the shore of Utah Lake. Although these Indians told of a great, salty lake farther north, the Spaniards failed to go on to it, and thus missed being the discoverers of Great Salt Lake.

The return route first led south to the Sevier River, Sevier Lake into which it debouches being called "Laguna de Miera" on the Miera map. Near this point some "bearded Indians," were encountered and the party continued south past the site of Cedar City, crossed the Virgin (called by Escalante the "River of the Sulphurous Pyramids") and proceeded southward to a point north of the Grand Canyon, below the Hurricane Cliffs and southeast of present-day St. George, Utah. Because of the roughness of the terrain ahead, the group was here forced to turn northeast, and since no practicable crossing of the Colorado could be found near the

Families (Santa Fe, 1954) pp. 229-231, records Miera's death on April 11, 1785, and provides considerable information on his descendants.

⁸Although in later years a great apocryphal Buenaventura River was to loom large on many maps, and although that invention was at times erroneously ascribed to Father Garcés, the name Buenaventura for a westward or southwestward-flowing river in the eastern Great Basin was initially proposed by Escalante when he crossed what is now known as Green River near the present-day town of Jensen, Utah. Later, after leaving its northernmost camp near the shore of Utah Lake, his party came to the stream now known as the Sevier River, where, though Escalante seems to have known better, Miera apparently believed he was again on the Buenaventura. Accordingly, on his beautiful map, the stream they had crossed so long before is shown coursing southwesterly from that crossing to the body of water known today as Sevier Lake, but which the Escalante party's doughty cartographer termed the Lago (or Laguna) de Miera. (Too bad that highly-appropriate name failed to stick!) See, in this connection, C. Gregory Crampton, "The Discovery of the Green River" (*Utah Historical Quarterly*, Vol. XX, No. 4, October, 1952, pp. 299-312).

Miera's Escalante Expedition Maps

mouth of the Paria River, it was found necessary to proceed northeasterly through the extremely rough country west of Glen Canyon as far upstream as the ford of the Colorado ever since called "The Crossing of the Fathers." This laborious detour took them across the river in full view of Navajo Mountain, which is called *El Cerro azul* (Blue Mountain or Peak) on one form of Miera's map, and *Cerro Prieto* (Dark Peak) on another. From this point, not without some further difficulties, the party made its way to the Hopi villages, thence to Zuñi, and finally back to Santa Fe, which was reached January 2, 1777.

The immense area traversed on this astonishing exploration is well delineated on Miera's map.⁹ Escalante did not reach Monterey, nor did he actually see the Great Salt Lake, but he learned more about the wild regions north, northwest and west of New Mexico than anyone had learned before him, and he penetrated much farther into the unknown than had any predecessor explorer.

Miera's map of Escalante's wanderings is known to exist today in at least six distinct manuscript copies, each exhibiting some differences from the others. They represent three basic forms or types, which may—for convenience—be designated as (A) the undecorated type, (B) the Tree and Serpent type, and (C) the Bearded Indian type. On all copies the basic topographical information is essentially similar, the major differences being in title and dedication, in notes and explanations, in the presence or absence of decorative or illustrative material, or in the particular orthography of the various individuals who produced these several copies. Whether any of the extant copies are from Miera's own hand is problematical, though it seems possible that the one designated as Type A may be such an original, as may also that here termed Type C, Copy 1. Some of the six copies were obviously drawn by professional scribes, two having been drawn or traced for the celebrated Kohl Collection at the

⁹J. Cecil Alter, discussing Miera's achievement, has remarked on his foreshortening of certain east-west distances, which is explained by the fact that compass directions and estimates of distances traveled were the only means the Escalante party had of determining longitude (*Utah Historical Quarterly*, 1941, Vol. 9, p. 66). As for north-south distances (latitudes), Escalante explained that "we used a quadrant to confirm our observations [of the North Star] by the sun" (Diary for Sept. 13). The remarkable quality of Miera's achievement is best appreciated when his map is compared with a modern map of the same area.

Mapping the Transmississippi West

Library of Congress. There is one known copy of Type A and one of Type B, while there are four of Type C.

Type A — The Undecorated Type of the Miera Map

(173) In the British Museum is a large manuscript map (filed as Additional Manuscripts No. 17, 661-C) which bears at least some evidence of being the original map which accompanied Escalante's *Diario Derrotero* when in May of 1777 it was sent on its way from Santa Fe to the Viceroy of New Spain at the direction of Colonel Pedro Fermín de Mendinueta, then Governor of New Mexico. Receipt of both documents was acknowledged from Chihuahua on July 30, 1777, by the Caballero de Croix, newly-appointed Comandante General of the *Provincias Internas*, which stretched along the northern frontier of New Spain, and it is to be noted that the other two forms of the map were dedicated to that official, whereas this Type A was dedicated to Bucareli, the Viceroy.¹⁰ The title of this map reads:

"Plano geografico de la tierra descubierta, y demarcada, por D^a Bernardo de Miera y Pacheco al rumbo del Noroeste, y Oeste del nuevo Mexico, quien fue en compañía de los RR.^s PP.^s Fr. Fran.^{co} Atanacio Dominguez, Visitador Comisario y Custodio de esta, y Fr. Silvestre Velez de Escalante, siendo uno del numero de las diez personas que acompañaron á dichos RR. PP.^s como constara en el Diario Derrotero que hicieron á que se remite en todo con el fin unico del servicio de ambas Magestades, el que va adjunto en dhō Diario al Exmō Sōr B^o D^a Fray Antonio Maria Bucareli y Ursua Teniente Grāl de los R. Exercitos de S.M., Virrey Govern.^{or} y Capitan Gral [sic], de esta nueva España, a quien humilde, y rendidamente dedican esta pequeña Obra por la direccion del Coron^l D^a Pedro fermín de Mendinueta Govern.^{or} y Capitan Grāl de este Reyno para

¹⁰El Caballero de Croix, a nephew of the Marqués de Croix (Bucareli's predecessor as Viceroy), accompanied his uncle to New Spain in 1766. On May 16, 1776, he was appointed Commander-General of the Internal Provinces, in which position he served with ability and honor until 1781, when he was made Viceroy of Peru. As Don Teodoro de Croix, he had been decorated in his youth with the Cross of the Teutonic Order, which carried the title *Caballero*. He was made a Field Marshal in 1779, and after distinguishing himself in Peru he retired in 1790, to Spain, where the King (Charles IV) conferred on him the Grand Cross of the Order of Charles III. He died in 1791. (See Alfred Barnaby Thomas, *Forgotten Frontiers*, Norman, Okla., 1932, pp. 376-379. Thomas is also the author of a biography of Teodoro de Croix, Norman, 1940.)

Miera's Escalante Expedition Maps

los fines que puedan conducir al bien de tantas Almas y al servicio de N. Catolico Soverano."¹¹

Below this title appear two extended legends, one terming the alleged "Sea of the West" a myth,¹² and the other describing the Comanches as warlike and powerful, masters of the lands of the buffalo.¹³ Towns, pueblos, Spanish villages, Indian houses and tepees, ruined Indian pueblos, Spanish homes destroyed by enemies, and springs of water are displayed

¹¹Translation: Geographic map of the region discovered and surveyed by Don Bernardo de Miera y Pacheco toward the northwest and west of New Mexico, he having been in the party of the Reverend Fathers, Fray Francisco Atanacio Dominguez, Visiting Commissary General and Overseer of it, and Fray Silvestre Velez de Escalante, one of the ten persons who accompanied said Reverend Fathers, as is set forth in the Journal they kept, the whole of which has been developed with the sole purpose of serving both Majesties. This map, together with the said Journal is being sent to the Illustrious Knight Commander Don Fray Antonio Maria Bucareli y Ursua, Lieutenant General of the Royal Forces of His Majesty, Viceroy, Governor and Captain General of this New Spain, to whom humbly and respectfully this small work is dedicated[,] at the direction of Colonel Don Pedro Fermin de Mendinueta, Governor and Captain General of this Kingdom, for such purposes as it may contribute to the welfare of many souls and to the service of our Catholic Sovereign.

¹²El Mar del Oeste que ponen en los Mapas Nuevos por este rumbo dandole de extension mas de 500 leguas de Leste á Oeste, y otras tantas de Norte á Sur, comunicandose los Lagos de los Bueyes, y de estos a la Bahía de Utsom, empezando a pintarle a los 41 g. de Latitud a la Vanda del Sur, lo que parece y sin duda sale ser equivoco, soy de sentir que todo lo que ellos ocupan con dicho Mar, ser Tierra firme, y mui poblada de varias Naciones que puedan vivir en politica, no invalde nuestros Españoles antiguos desde el tiempo de D.^o Fernando Cortes prosiguiendo hasta los presentes han anelado á descubrir y Poblar la Costa de California por muchas noticias que adquirieron de las gentes que habitaban en estos parages, y el haver salido la Nacion Mexicana de ellos.

The Sea of the West, shown on the new maps extending in this direction more than 500 leagues from east to west and the same from north to south, communicating with the lakes of the Bueyes, and from them to the Bay of Utsom, is indicated as beginning at 41 degrees of Latitude on the south side, which apparently and without doubt is in error. I believe that all they show as the said sea is dry land, populated by various peoples who are able to live in organized societies, which is why our ancient Spaniards, from the time of Don Fernando Cortes down to the present, have longed to discover and settle the coast of California, because of many reports they had of the people who lived in those places, and the fact that the Mexican Nation emerged from them.

¹³Tierra incognita que poseen los Cumanchis: Esta Nacion es mui belicosa y feroz se han hecho dueños de todos los Campos de Cívolos desde los Yamparicas hasta la Provincia de los Texas, es muy diestra en el manejo del Cavallo; han despojado de sus Tierras á la Nacion de los Apaches señoreandose de todas ellas arrinconandolos á las Fronteras de las Provincias de Nuestro Rey: Estas dos dhas Naciones son las que hace muchos años en una Guerra continuada, han ostilizado este Reyno, la una por el Norte y Oriente, y la otra por el Sur, y Occidente, y ha llegado á tal consternacion que no han dejado Pueblos, Villas, y Ranchos de Españoles á donde no hayan combatido.

Unknown region possessed by the Comanches. This nation is very warlike and cruel. It has made itself master of all the buffalo plains, from the land of the Yamparicas to the Province of Texas. It is very skillful in the handling of horses. It has dispossessed the Apache nation of all its lands, becoming master of all those as far as the frontiers of the provinces of our King. These two said nations are those which for many years have been in a continual state of war against this kingdom, the one by the north and east, and the other by the south and west, and have brought about such panic that they have left no towns, cities or ranchos of Spaniards unattacked.

Mapping the Transmississippi West

by use of illustrative symbols which are listed in a table at the lower left corner of the map—along with a symbol (consisting of a circle surmounted by a cross) denoting the stopping point of the Escalante party after each day's journey.¹⁴ In addition to a multitude of placenames applied to rivers, mountains, lakes and other geographical features, and also names of many Indian tribes, certain highly interesting legends were included by Miera on his map. Thus, in the mountainous area northwest of New Mexico, he remarked:

“Esta Sierra es el Espinazo de esta America Septentrional y los Rios que de ella nacen a la parte del Oriente entran en la Mar del Norte ó seno Mexica^o y los de Poniente en la del Sur: es mui fria, y lo mas del Año esta cubierta de Nieve en ella se crian las Grullas por su mucha umedad.”¹⁵

Farther west and south, at the confluence of the Rio de Nabajó (the San Juan) and a river termed the Rio de las Animas (not to be confused with the stream of that name east of the Rockies, which Miera also shows), the cartographer calls attention to the ruins of earlier Pueblo civilization, remarking:

“Las Vegas de estos dos Rios son Capazes de poblar mui grandes Poblacion^s y de muestran Las Ruinas de Pueb^os antiguos mui grandes.”¹⁶

Far to the west, south of the Laguna de Miera, at the spot where the party drew lots to determine whether they should proceed with their

¹⁴Alleged “free translations” of the notes on Miera's map accompanied J. Cecil Alter's article on “Father Escalante's Map,” *Utah Historical Quarterly*, Vol. 9, pp. 64–72. Apparently there was some misreading of certain portions of the Spanish text, and these translations should therefore be used with caution.

¹⁵This mountain range is the backbone of North America and the rivers which rise from it on the east flow into the North Sea or Gulf of Mexico, and those of the opposite side [flow] into [the Sea] of the South. It is very cold, and for most of the year is covered with snow. Cranes breed in it because of its moisture. [Later maps were even to term a nearby range of mountains the Sierra de las Grullas.]

¹⁶The lowlands along these two rivers are adequate to support very large populations as demonstrated by the ruins of very large towns.

[It is interesting to note that, in his letter to the King written from Chihuahua on October 26, 1777, Miera stated that the second presidio and settlement which he was recommending should be established on the Navajo River, “along the beautiful and extensive meadows which its margins provide for raising crops, together with the convenience of the timber, firewood, and pastures which they offer. There still remain in those meadows vestiges of irrigation ditches, ruins of many large and ancient settlements of Indians, and furnaces where apparently they smelted metals.” (Bolton, *Pageant in the Wilderness*, p. 245.) Miera doubtless erred as to the smelting of metals, but extraordinary ruins of the ancient peoples still distinguish this general area, the best known being probably those of Mesa Verde.]

Miera's Escalante Expedition Maps

original purpose of finding a land route to Monterey, as Miera urged, or should return to Santa Fe, as the two priests by that time ardently desired, appears the following:

“En este paraje determinamos no seguir el rumbo de Monte rei por la falta de vastimento, y la entrada de el Ynbierno p^a lo qual se hecharon suertes, y mudamos el rumbo para los Coninas, por mi q^{ta} faltaban p^a llegar á Monte rei 140 Leguas.”¹⁷

Southeast from this point and across the Colorado are the words:

“Esta Nacion Conina haze muchos años pretende ser christiana desde el t̄po del P. Espeleta q^c fue el primero queles predicó siendo Misionero de Oraibe en donde lo mataron los Moquis el Año de 80 en la sublevacion gr̄al.”¹⁸

At the extreme southwest corner of the map, beyond “el Rio Grande Colorado” one reads:

“Este Rio Colorado desde la junta de los dos Rios de Zaguaganas, y Nabajo para abajo vá mui encajonado de Piedra colorada, y mui profundo, y escarpado su cajon sin Arboles.”¹⁹

Finally, in the Navajo country, is found the following:

“Toda esta Provincia es de Mesas, y Peñones y mui escasa de Agua, Siembran de temporal tienen ganados menores, y tejen buenas mantas.”²⁰

¹⁷At this place we determined not to continue toward Monterey because of lack of provisions and the coming on of winter. The decision was reached by drawing lots, and we changed direction toward the Coninas, it still being 140 leagues to Monterey by my reckoning.

[This casting of lots occurred on October 11, 1776. Escalante devoted considerable space to it in his Journal, blaming Miera for stubbornness in desiring to continue the search for a land route to Monterey. Apparently the dispute between Miera and the two friars became almost bitter, but in the end everyone agreed to abide by the lot which might be cast. It fell in favor of turning toward Conina, or Cosnina (and Santa Fe), and Escalante gave thanks that “we all agreeably and gladly accepted this result.” (Bolton, *Pageant in the Wilderness*, pp. 197-199.)]

¹⁸This Conina nation has for many years aspired to be Christian, since the time of Father Espeleta, who was the first who preached to them, being Missionary at Oraibe where the Moquis killed him in the year [16]80 during the general uprising. [The Coninas are today called the Havasupai, and they live now, as in Escalante's time, in the depths of the picturesque gorge of Cataract Canyon, within the general area that has now become the Grand Canyon National Park. Fray José de Espeleta was stationed at Awatobi, a now-ruined Hopi village, as early as 1663, and seems to have removed to Oraibe not long before the Pueblo uprising of 1680.]

¹⁹This Colorado River from the junction of the two rivers, Zaguaganas and Navajo, flows between walls of red rock, very deep and rugged; its box canyon has no trees. [An interesting early thumbnail reference to the Grand Canyon.]

²⁰This whole province is comprised of mesas and cliffs and is much lacking in water; they plant to take advantage of seasonal storms; they have sheep and goats and weave fine blankets. [As a

Mapping the Transmississippi West

In addition to these legends, numerous other items of interest appear on this remarkable map. Just west of the note concerning the Comanches, below the title, is a short stretch of river carrying the intriguing words "puede ser el Misuri." It was not, of course, the great Missouri, but the presence of this note shows that the Spaniards of New Mexico already knew that it, or at least some of its branches, rose from what Miera termed the spine, or backbone, of North America, not far north of the Rio de Napeste (the Arkansas). Without much doubt Miera's note respecting the "Misuri" refers to the South Fork of the Platte, and it should be noted that this particular legend does not appear on any of the other forms of Miera's map.

There is no legend on this Type A of the map with respect to the Bearded Indians encountered by the party on the Rio Salado near the northern shore of Laguna de Miera. Farther south, however, appears a legend which was to be found on many maps over the next half century. On the way south from Laguna de Miera, the party crossed the Virgin River, and this stream is labeled R. de los Peramides. Just above this last word are several indications of tall peaks labeled Piramides sulfureos. On the second form of this map the stream becomes R. de los Peramides Sulfureo, with no separate legend on the tiny peaks themselves, while on the third form of the map the legend is Rio sulfureo de los Piramides. Miera's "River of the Sulphurous Pyramids" was to be a feature of many later maps over a long period of years.

Escalante's name Buenaventura is here applied to the stream later known as the Green, which on Miera's map flows into the Laguna de Miera (Sevier Lake) instead of joining the Zaguaganas (the upper Colorado). Humboldt's subsequent use of Buenaventura as a name for a river on his monumental and widely-distributed map of New Spain, gave the commercial cartographers the opportunity they were seeking, and they delightedly affixed this resounding name to an apocryphal river they drew flowing west from the Rocky Mountains across what is now known
[thumbnail description of the Navajo country and its people, this brief statement has perhaps never been surpassed.]

Miera's Escalante Expedition Maps

to be the Great Basin and on across the highest summits of the Sierra Nevada and the California Coast Range to the Pacific. Along with Escalante's other high-sounding word, Timpanogos, a Ute placename which later became used for a similar westerly-flowing river,²¹ the term Buena-ventura for many years enjoyed a firm and important place on the maps of the cartographers of both Europe and the youthful United States. The frequent ascription of this particular name to Father Garcés was as apocryphal as was the river itself, for the river he said the Nochi Indians of the San Joaquin Valley reported to him became the San Felipe, another of the several westward-flowing streams that the cartographers used for so long to fill the unknown voids between the Rockies and the Pacific.

It is interesting to note that Miera's Navajo Mountain—his "Cerro prieto" (Dark or Black Peak)—is represented by a drawing obviously made by someone who had seen this particular peak. The great cliffs which rim the mountain seem carefully drawn, with canyons rising up through them to the "bench" (at about the 9,000 foot level) with its magnificent forest of yellow pine, above which the final peak rises another 1,500 feet.²²

This British Museum "Type A" copy of Miera's map (referred to by Woodbury Lowery in the explanation of his Item 593) is in handwriting and style quite similar to Miera's 1779 map of New Mexico, which will be discussed later, though the title of that map is certainly from a different hand. The dedication of this particular form of Miera's Escalante expedition map to Viceroy Bucareli is at least one of several indications that this type represents the earliest form of the map.²³

²¹It was Miera who affixed the word Timpanogos to the lake beside which the party camped, and on some types of his map Timpanogos is also applied to the larger, saltier lake to the north, of which they heard but which they did not see.

²²In his *Diario* for November 7, 1776, Father Escalante wrote: "Eight or ten leagues to the northeast of the ford [the "Crossing of the Fathers" over the Colorado] there is a high, rounded peak which the Payuchis, whose country begins here, call Tucané, which means Black Peak, and it is the only one which can be seen close at hand from the river crossing."

²³In the *Utah Historical Quarterly*, Vol. 11, 1943, opp. p. 38, Herbert S. Auerbach reproduced (in small size) a Miera Escalante expedition map which he declared was from "the original map now in Madrid," through a photostat in the Newberry Library. However, examination of that photostat discloses that it was in reality made from British Museum Additional Manuscript No. 17, 661-C, the Miera map "Type A" here being discussed. So far as the present writer has learned, no

Mapping the Transmississippi West

Type B — The "Tree and Serpent" Type of the Miera Map.

(174) A copy of another type of Miera's map is preserved in the Ministry of War at Madrid. In execution it differs materially from Type A, and just to the left of its title appears a vignette of a tree down which a coiled serpent is descending. It may therefore appropriately be called the "Tree and Serpent" form of the map, and is here denoted "Type B." The title is similar to that of Type A except for the dedication, which instead of being to Viceroy Bucareli is to the "Comandante General de las Provincias Ynternas, el S^{or} Brigadier de los R^s Exercitos Cavallero Croix," and except that near the end of the title, after the word "Almas" appear the words "que desean ser Christianas," before "y al servicio." Perhaps the words referring to souls desiring to be Christian were omitted by error from the title of Type A, and may have been here supplied to reinforce the meaning of the sentence.

Type B contains the same two lengthy notes under the title that have been mentioned under Type A, the one referring to the Sea of the West and the other to the Comanches, but although the short stretch of river appears just west of the latter note, the intriguing legend "Puede ser el Misuri" is lacking. Navajo Mountain is labeled "el Cerro Prieto," as on Type A, but the name of the camping spot nearest to it (San Miguel) does not appear.

Although a few slight differences exist in some of the other legends, in general this Type B of Miera's map is similar to Type A. It is from the hand of an obviously more talented and probably professional copyist, who seems to have added the Tree and Serpent decoration as his own idea. The fact that it was dedicated to the Caballero Croix instead of to the Viceroy indicates that the newly-appointed Comandante General of the Internal Provinces was on hand by the time it was prepared. There is no indication of where it may have been drawn, but the change in dedication would indicate that either this copy, or some still unknown copy from which this may have been prepared, was produced in New Spain, original of this type of Miera's map exists in Madrid, or—for that matter—anywhere except in the British Museum.

Miera's Escalante Expedition Maps

probably somewhere in the Internal Provinces. Chihuahua seems the likeliest place.

Type C — The "Bearded Indian" Type of the Miera Map.

The third form in which Miera's map of the Escalante party's route is found is here identified as "Type C." It has often been termed the "Bearded Indian" type because of a drawing of four Indians in what was on the other forms largely an empty area just west of the Rio de Zaguagana (the upper Colorado, above its junction with the San Juan, which is here termed the Nabajo) and due east of the Laguna de Miera. The drawing displays two bearded males, one holding a rabbit he has just caught, and two females, one clothed only in a short skirt and the other holding a large game net. In the upper right-hand corner of this map is another drawing, a flamboyant and wholly-irrelevant representation of a Papal chariot, drawn by two lions, with a large Spanish banner and the Pope himself holding aloft a golden monstrance.

Four distinct copies of this Type C of Miera's map have turned up, and will be discussed separately. The fact that it was dated at Chihuahua in 1778 and contains certain notes not found on Types A and B leads to the surmise that Miera probably drew at least the prototype of this form of his map in Chihuahua late in 1777, after the earliest form of the map had been sent on to the Viceroy in Mexico City. As will be noted, his letter to the King of Spain, dated at Chihuahua October 26, 1777, contains passages from which some of the notes added on Type C of the map were obviously derived.

Type C, Copy 1. What seems to be the—or at least an—original of this third type of Miera map is, like Type A, preserved in the British Museum (Additional Manuscripts 17,661-D). How either of these important manuscript maps happened to come to rest in England has not, to my knowledge, been explained, though for centuries British diplomats and naval officers assiduously collected such documents, wherever they appeared. This copy of Type C of the Miera map displays topographical information generally similar to that on the Escalante expedition maps here

(176)
1778 MIERA, I

Mapping the Transmississippi West

termed Types A and B, but it has quite different decoration and a much amended title, while many variations in legends set this type apart from those others. Its title, in full, reads:

“Plano Geographico, de la tierra descubierta, nuevamente, à los Rumbos Norte, Noroeste y Oeste, del Nueva Mexico. demarcada por mi Don Bernardo de Miera y Pacheco, que entrò a hacer su descubrimiento, en compaña de los RR.^s PP.^s fr. Francisco Atanacio Doming^s y Fr. Silbestre Veles, segun consta en el Diario y Derrotero que se hizo y se remitió à S. M. por mano de su Virrei con Plano à la letra: El que dedica Al S.^r D. Teodoro de la Croix, del Insigne Orden Teutonica Comandante General en Gefe de Linea y Provincias de esta America Setemptrional, por S. M. hecho en S. Ph.^e el Real de Chiguagua. Año de 1778.”²⁴

It is interesting to note that Miera here specifically declares that the newly-discovered region shown on this map was surveyed “by me;” that he uses a more detailed honorific title for its dedicatee than Cavallero Croix (which he spells Crois), and that he dates this copy of his map in 1778 at Chihuahua, to which city the new Comandante General of the Provincias Internas had recently come to set up headquarters. He also omits “de Escalante” from the explorer’s name, Vélez being the friar’s family name, spelled here “Veles.”

To the left of the title of this map, in a space beneath the lions of the Papal chariot, is a long note respecting the Comanches, quite different from the note about those Indians which appears below the title on Types A and B.²⁵ The note of Types A and B respecting the Sea of the

²⁴Geographic map of the region newly discovered to the north, northwest and west of New Mexico, surveyed by me, Don Bernardo de Miera y Pacheco, who entered [this land] to effect its discovery, in the company of the Reverend Fathers Fray Francisco Atanacio Domingues and Fray Silvester Veles, as set forth in their Journal transmitted to His Majesty through his Viceroy along with the manuscript map. This is dedicated to Señor Don Teodoro de la Croix, of the celebrated Teutonic Order, Commander General in Chief of the frontiers and provinces of this North America. Drawn by his hand in San Phelipe el Real de Chihuahua in the year 1778.

²⁵This note reads: Esta Nacion Cumanche, hace pocos años se aparecio primero a los Yutas, dicen saliò por la banda de el Norte Rompiendo por entre barias Naciones, y dhõs Yutas los trujeron à hacer Cambios con los Españoles, traian multitud de Perros, Cargados con sus Pielas y tiendas; se hicieron de Caballos y Armas de fierro, y se han ajilitado tanto, à el manejo de el Caballo, y à ellas que abentajaban à todas las Naciones en su agilidad y Animo, se han echo S.^{tes} y dueños de todos Campos de los Zibolos, quitándoselos à la Nacion Apache, la que ara la mas dilatada que se ha conocido en la America, han destruido muchas Naciones della. Y los que han quedado, los han arrinconado à las fronteras de las Provincias de Nrò Rey. Causa porque se experimentá tantos

Miera's Escalante Expedition Maps

West is missing on Type C,¹ but most of the other notes or legends which appear on it are reminiscent of those on the other types, though there are numerous deviations of detail. For example, the legend at the summit of the Rockies here reads:

"Esta Sierra es el Espinazo de esta America Setemtrional, pues sus Aguas que en muchos Rios que de ella Nacen vierten en los dos Mares, El Sur y Seno Mexicano en ella se crían las grullas."²⁶

At the junction of the Rio de Nabajo and the Rio de las Animas the description is shortened to:

"Aqui se manifiestan las Ruinas de grandes Poblaciones de Yndios antiguas."²⁷

At the spot where the lots were cast to decide whether to proceed toward Monterey or to return to Santa Fe appears the following shortened and impersonalized legend:

"En este paraje se determino El dexar el Rumbo de el Puerto de Monterrei por haverse acabado el bastimento y temer el y[n]vierno."²⁸

And, along the Colorado River, where it leaves the map, we read:

"Este Rio ba mui encajonado en Peñasqueria Colorada, y mui escarpada."²⁹

It has already been noted that on Type C of Miera's map the Virgin River is called "Rio sulfereo de los Piramides," rather than the "R. de los Peramides Sulfureo" of Type B, or merely the "R. de los Peramides" of daños, pues les falta su primer mantenimiento les obliga la necesidad a mantenerse con Caballos y Mulas.

This Comanche nation first appeared in the land of the Utes a few years ago. They say they left the region farther north breaking through various nations, and the said Utes brought them to barter with the Spaniards; they brought many dogs loaded with their hides and tents. They obtained horses and iron weapons, and they have acquired so much skill in handling both that they excel all nations in their dexterity and hardiness. They have made themselves the lords and masters of all the buffalo country, taking it from the Apache nation, which was formerly the most widely extended of all known in America. They [the Comanches] have destroyed many of the Apache nations, pushing those that were left to the frontiers of our King's provinces. This has caused a great deal of suffering, since their primary lack of provisions is forcing them to subsist on horses and mules.

²⁶This mountain range is the backbone of North America, since the many rivers that are born of it empty into the two seas, the South Sea and the Gulf of Mexico. In this range cranes breed.

²⁷Here are the ruins of large ancient Indian settlements.

²⁸At this spot it was determined to abandon the route toward the port of Monterey, because of lack of food and fear of winter.

²⁹This river flows through a canyon of red, rocky and steep cliffs.

Mapping the Transmississippi West

Type A. And Navajo Mountain here becomes "El Cerro azul" (the Blue Peak), instead of "El Cerro Prieto" (the Dark, or Black Peak). However, since a major distinguishing feature of this type of the map is the drawing of four Indians, two with beards, east of the Laguna de Miera, it is interesting to find the legend "los Barbones tuabichis" (the Bearded Tuabiches)³⁰ inserted on this third type at the point near that lake where the bearded Indians were encountered,³¹ as well as the legend "Barbones tuavichis" just below the illustration itself.

On the maps denoted Types A and B, Miera labeled Utah Lake, on the eastern borders of which the party camped, "Laguna de los Timpanogogs," the last being a great and enduring name, for today Mt. Timpanogogs still rises majestically not far from the Escalante party's campground, while over many years a mighty, though imaginary, Timpanogogs River coursed cartographically to the Western Sea from the great salty lake to the north. That lake, which the group did not see but of which they heard from the Indians of Utah Valley, was unnamed on Types A and B, but on Type C we find the words "Laguna de Timpanogogs" spreading across both lakes. On all forms of the map a river enters the northerly lake from the east and another flows out of it to the west. On Type C only, however, appear the following legends, north and south, respectively, of this westerly flowing stream. The northerly one reads:

"Hade ser este Rio el del Tizon, descubierto antiguamente por el adelantado Dⁿ Juan de Oñate, el que no pudo pasar por su mucha anchura y hondor, puede ser Nabegable; se dize haber de la otra banda, muchas Poblaciones grandes de Yndios que viven en politica."³²

³⁰The word Tuabiches seems to be a tribal name used by Miera for these people, and Dale L. Morgan has suggested that this word may be a variant of "Tabehuaches," which is the name for a large division of the Utes. Escalante seems to have used that term in his journals (cf. Bolton, *Pageant in the Wilderness*, p. 144).

³¹It was on September 30, 1776, that the Escalante party first saw the bearded Indians which Miera memorialized on Type C of his map. (Bolton, *Pageant in the Wilderness*, pp. 189-193.)

³²This must be the Tizon River, discovered long ago by Governor Don Juan de Oñate, who could not cross because of its great width and depth. It may be navigable. It is said that on the other side are many large settlements of Indians who live in civilized communities.

[In his October 26, 1777, letter to the King, Miera remarked that, "The river which the inhabitants say flows from the lake, and whose current was toward the west, they say is very large and navigable. And if it is as they say, I conjecture that it is the Rio del Tizon discovered long ago by Don Juan de Oñate, first colonizer of New Mexico. And it is said that from this river he turned

Miera's Escalante Expedition Maps

And the southerly legend reads:

"dicen los Timpanogos, que las Gentes que havitan al poniente de su Laguna, y Sierra alto que se mira desde sus havitaciones á dicho Rumbo, que eran antes sus amigos, y que usan las puntas de sus flechas, Lanzas, y Macanas de un Metal Amarillo convienen con las relaciones antiguas."³³

Whether this or the next-mentioned copy of this map is an original prepared by Miera himself seems problematical, though there appears to be some internal evidence in favor of each of the two maps. One bit of evidence that may be important consists in the fact that at least three erasures and corrections appear on the British Museum copy of Type C now under consideration. They involve the words "echo S^{tes} y" in the eighth line of the note respecting the Comanches just to the left of the map's title; the word "obliga" in the next to the last line of that note, and certain obvious corrections in the third and fourth lines of a note just east of Lake Timpanogos which does not appear on Types A or B.³⁴ These passages appear in their corrected form on all three other copies of Type C (The "Bearded Indian" type), leading to the conjecture that Copy 1 may have been an original production which still bears evidence of its author's plodding efforts.³⁵

Type C, Copy 2. The *Archivo General* in Mexico City possesses a Type C (Bearded Indian) manuscript copy of Miera's map which is of interest (177) 1778 MIERA, 2

back because he was not able to cross it on account of its great width and depth. . . . They told him that on the other side of the river there were large settlements in which lived civilized Indians" (Bolton, *Pageant in the Wilderness*, p. 245).]

³³The Timpanogos Indians say that the people who live on the other side of their lake, and [in] a high range of mountains that they can see from their houses in the said direction, were formerly their friends, and that they make the tips of their arrows, lances and swords of a yellow metal, according to old reports.

[The yellow metal was possibly copper, though no copper artifacts seem to have been found in this area, and no Utah Indians of Escalante's period or earlier appear to have attained a cultural level characterized by knowledge and use of copper.]

³⁴The corrections involve the words "oeste, Norte, y Nordeste," the first having been altered to "oeste" after the wrong word had been written. The entire note reads:

"Asta aqui llega la Nacion de los Cumanchis Ympidiendoles à su maior estension el Rio mui Caudaloso, y Lagunas, que al oeste, Norte, y Nordeste de sus havitaciones tienen."

Bolton, *Pageant in the Wilderness*, page 73, translates this note as follows: "The Comanche nation reaches as far as here. Preventing their expansion are the very numerous rivers and lakes in the east, north and northeast of their habitations."

³⁵Of course, the contrary conjecture is possible—i. e., that this copy was hurriedly made from some other copy and bears witness to this in its erasures and corrections. For many reasons, this does not appear probable.

Mapping the Transmississippi West

because it was the one selected by Herbert Bolton as the copy to be reproduced in his *Pageant in the Wilderness*. He had certain obvious corrections made,³⁶ and apparently had the map hand-copied instead of having it photographed.³⁷ Also, additional color was painted onto some of the lakes, as well as around the frame of the title cartouche and on the Pope's lion-drawn chariot, which a photograph of the original discloses to be but lightly colored, if at all.

This copy, though essentially similar to the Type C copy in the British Museum, differs from that copy in several respects. For example, the words "Yutas Payuchis" appearing on that copy above some tepees just north of the Rio de Nabajoo (northeast of Navajo Mountain, there termed El Cerro Azul) do not appear on the Mexico City copy, or on Dr. Bolton's published tracing of that copy. Nor do we find the words "Barbones tuavichis" on either of these copies just below the drawing of the bearded Indians, though this legend has been noted as appearing on the British Museum Type C map. There are numerous other differences of detail, and it is suggested that the copy in Mexico City may well be an early copy of Type C, Copy 1, perhaps drawn by Miera himself in Chihuahua for Comandante General Croix.

The Kohl Copies

A special problem is presented by two differing tracings of Miera's map in the Kohl Collection at the Library of Congress. Both bear along their center lower borders the legend "New Mexico by Escalante. 1778," in bold block-letters (a type of heading found on many of the Kohl tracings), and both are of Type C, the "Bearded Indian" form of the map.

³⁶On the original in Mexico City the word "Laguna" in the legend "Laguna de los Timpanogos" is misspelled "Launa," and the same word in the legend "Laguna de Miera" is written "Lacuna," as appears on a photostat of the original obtained from Dr. Frederick W. Hodge, of the Southwest Museum, who had the late Dr. Nicolás León photograph the Mexico City copy for him many years ago. The Bancroft Library also has a microfilm of this map.

³⁷Many small differences of detail disclose that the Bolton map was hand-traced. Indeed, quite recently Dr. George P. Hammond, Director of the Bancroft Library at Berkeley, has had a somewhat similar tracing or re-drawing made from this Mexico City copy of Miera's map. The word "Launa" appears on this new copy and thus bespeaks its origin, which Dr. Bolton's corrected copy did not do. Nor did Dr. Bolton at any point identify, or state the location of, the copy he was reproducing.

Miera's Escalante Expedition Maps

However, they were obviously drawn by different scribes and one lacks many placenames that appear on the other. The appearance on them of certain legends omitted on Type C, Copy 2, but appearing on Type C, Copy 1, leads to the belief that they were prepared from that copy, perhaps when Kohl visited the British Museum. For some reason both omit many of the placenames that are to be found on all other copies of Miera's map in the New Mexico settled area. Although these Kohl Collection tracings are not contemporary archival copies, and although they do not declare their origin, or state from what original manuscript copy or copies they were made, it seems appropriate—in order to complete this analysis—to discuss them separately as Copies 3 and 4 of Type C of the Miera map.¹⁸

Type C, Copy 3. This tracing bears the legend "Barbones tuaviches" below the bearded Indian drawing. The legend "Cerro de la Xi" of Type C, Copy 1, appears as "Cerro de la Xr" (on Type C, Copy 2, it was written out—"Cerro de la Xicarilla"). Navajo Mountain becomes "El Cerro Oxul Payuches," an obvious mistake of the copyist who makes azul into oxul and who attaches to this legend the word "Payuches," whose placing on Type C, Copy 1, might well have led him to such an error, though this could hardly have happened had Copy 2 been the map being traced. Topographic details, such as mountains, here appear as mere outlines of buttes or rows of peaks, without the shading or other detail of the more elaborate Copies 1 and 2, and the drawings of the bearded Indians and of the Pope's chariot also appear in mere outline. The leaf decor to the right of the oval title-cartouche frame on Copies 1 and 2 (a band of color being used for the left side) is not traced, but has been drawn with much greater detail of small leaves by the copyist. (178)
1778 MIERA, 3

The legend "Apaches cuchun Marica" not far below the title of this Copy 3 follows Copy 1 rather than Copy 2, on which the middle word is "cuchum," and in numerous other details the tracing appears to have been made from the copy of the Miera Type C map now in the British

¹⁸These copies are mentioned by Lowery and are (inadequately) discussed in a note under his Item 607.

Mapping the Transmississippi West

Museum (or, possibly, from some copy of that particular form not yet located).

(179) *Type C, Copy 4.* This copy is similar to Copy 3, the other Kohl tracing, but was obviously prepared by a different copyist. Numerous details that appear on that copy are here omitted—such as “Barbones tuaviches” under the bearded Indian picture, and any name at all for Navajo Mountain. However, the words “Cerro de la Xr” and “Apaches cuchun Marica,” along with numerous other similar legends, point to Type C, Copy 1 (or some as yet unidentified copy of it) as this tracing’s origin. The leafy frame to the right of the title here resembles that on Copies 1 and 2 much more than does that of Copy 3, and mountain peaks and ranges have been given some shading. Here, as on Copy 3, however, details of the New Mexico settlements are lacking, and this particular copyist has carelessly omitted numerous minor elements, such as the “de” and the “Na” of “Provincia de Nabajoo,” making it “Provincia bajoo.” There is no legend at all where Miera so carefully noted the “backbone” of the continent.

This Copy 4 may have been traced from the same original as Copy 3, but is less professionally drafted, while the placing or omission of many legends leads to the suspicion that some copy not yet discovered may have been the source of this second form of Kohl Collection tracing.

To Recapitulate.

Don Bernardo de Miera y Pacheco’s map of the route followed by the Dominguez-Escalante party in its 1776 probe of the “Northern Mystery” has been found in six distinct manuscript copies, exemplifying three separate types. *Type A* is dedicated to Viceroy Bucareli, and bears no added adornment or illustration. The single copy of this type (preserved in the British Museum) was probably drawn soon after the return of the party to Santa Fe early in 1777. *Type B*, which also exists in but a single copy, is similar to Type A, but was dedicated to the Caballero Croix. It was drawn by a professional copyist who framed the title with a drawing of a serpent descending a tree, and is probably of a later date in 1777 than

Miera's Escalante Expedition Maps

Type A, or may even have been drawn from Type A at some subsequent time. It is preserved at the Ministry of War in Madrid. *Type C* is dedicated to Teodoro de la Croix (the same official termed the Caballero Croix in Type B), and contains a drawing of four Indians, the two males sporting full beards. Above its title, which differs somewhat from those of Types A and B, is a drawing of a Papal chariot drawn by two lions. There are added or different legends at several points, and the map is dated at Chihuahua in 1778. It exists in four known copies, two of which are contemporary manuscripts, one now in the British Museum and the other in the National Archives at Mexico City, and two of which are later tracings preserved in the Kohl Collection at the Library of Congress, apparently drawn from slightly differing originals whose location is undisclosed.

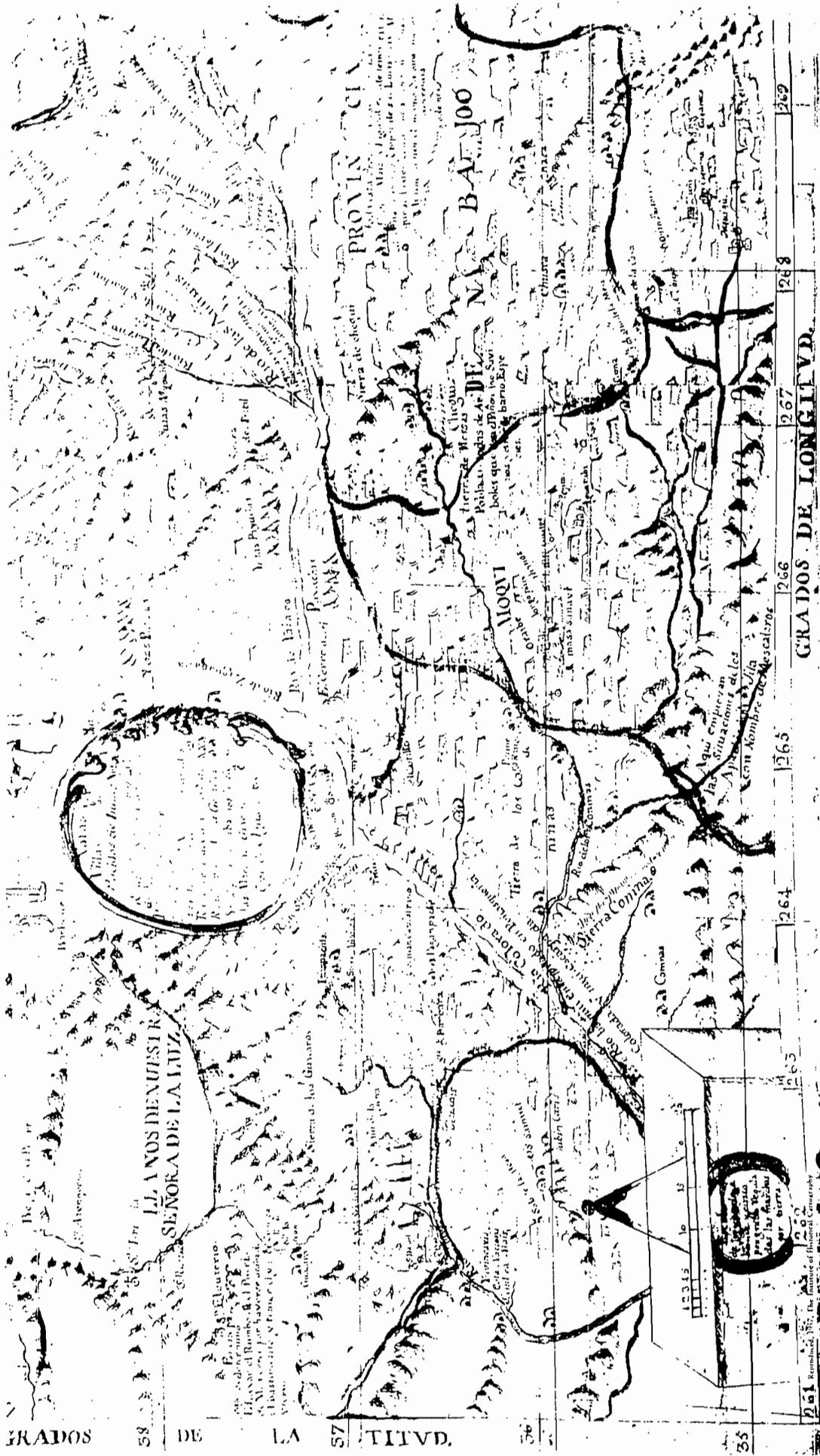
It has been deemed appropriate to devote an entire chapter to the Miera map of Escalante's expedition, not only because of its paramount import and preeminent place among early maps of the American West, but because of the confusion and widespread lack of information that has prevailed respecting this major cartographic achievement. It represented the first attempt of any European to portray cartographically, from personal experience, the complex upper Colorado River basin, and it was the first to show the lakes and streams of the east-central portion of the Great Basin. Many of its notes and legends afford prime data respecting important human and topographic elements of the area covered.

No map drawn prior to the Escalante party's prodigious exploratory *tour de force* offered even a fraction of the broad and remarkably accurate coverage that Miera was able to include on his map in respect of a vast, newly-discovered—though only partially understood—area of the American West. Indeed, Miera scored many "firsts" on his great map, and it is interesting to note that, among other items that had never before appeared on any map, were what we today know as the Green, White and Duchesne rivers, the Uinta and Wasatch mountains, the Spanish Fork and other streams draining into Utah Lake, that lake itself and the (rumored) Great Salt Lake to the north, the Sevier River and Lake, the Vir-

Mapping the Transmississippi West

gin River, and the La Sal and Abajo Mountains of southeastern Utah (called by their present names). To be sure, Miera erred respecting the Green (his Buenaventura), but he did a magnificent job on the San Juan (his Rio de Nabajo), and he afforded excellent data on the Dolores and other upper Colorado affluents, as well as on the Arkansas and other easterly-flowing Rocky Mountain streams.

The equal of this map would not appear for many a year, and through the use of Miera's material by Alexander von Humboldt, the New Mexican cartographer left a stamp on the representation of the West that was not erased until the time of Fremont, three-quarters of a century later, after men of a nation born the very year of the Escalante party's adventure had successfully crossed the North American continent north of and southwesterly and westerly of the Lake Timpanogos of these New Mexican explorers. The two American captains, Lewis and Clark, whose map did not appear in print until 1814; Jedediah Smith, whose map lay buried for more than a century, and Fremont, whose most important map was published in 1845, were all made of the same metal as that of Fathers Francisco Atanasio Dominguez and Silvestre Vélez de Escalante and their doughty engineer-cartographer, Don Bernardo de Miera y Pacheco.



58 DE LA 57 TITVD. 56
 266 267 268 269
 264 265

GRADOS DE LONGITUD.

261
 Reproduced, 1957, by permission of Historical Geography

Mapping the Transmississippi West

deavoring to give his map the appearance of a small plaster model of the country, with the light falling upon it at a particular angle. Such a model of a bare and rocky region would strongly resemble nature. Portions of the mountain sides and of the edges of the ravines would appear in brilliant light, others in deep shade. Level plateaus and valleys would have a uniform tint; the lightness or darkness of which would depend on their elevation or depression. Mr. Egloffstein devised the plan of producing the different tints by means of fine parallel lines, drawn upon the plate with a ruling machine; each part of the ruled portion being brought to the requisite shade by exposing it a longer or shorter time to the action of the acid. The maps were engraved by him in accordance with this plan. The topography was constructed from the field notes directly upon the plates. The latter were of steel; it being feared that copper would not be hard enough to give a sufficient number of impressions of the more delicate tints. The Topography was first delineated; the lettering was then put on; and afterwards the plates were ruled.

"A glance at the result will show how far the experiment succeeded. There are defects readily to be perceived, and further experience will doubtless suggest many improvements, but I think," said Ives, "it will be generally admitted that, for maps of such a character of country, and upon such a scale, this style—which is believed to be new, so far as regards the application of the ruled tints—is, in beauty and effectiveness, much superior to the old. It possesses the power, which the other does not, of exhibiting the comparative altitudes of plateaus of different elevations. This is particularly apparent in map No. 2. The alluvial lands along the Colorado and Flax rivers, being designated with a darker tint, are distinctly defined, as well as the boundaries and extent of the mesas that limit them. The loftier table lands, by their lighter appearance, may also be distinguished from lower levels. In the old style, these effects could not be produced.

"This method of representing topography is less conventional than the other, and truer to nature. It is an approximation to a bird's eye view, and is intelligible to every eye. Another advantage of the system

(963) 1858 WHIPPLE, W. D.

SKETCH OF THE NAVAJOE COUNTRY
Drawn by
1st Lieut W.D Whipple 2d U.S. Infantry.
TOPOGRAPHICAL OFFICER, NAVAJOE EXPEDITION.



Reproduced, 1960, the Institute of Historical Cartography.

The Maps of 1858

is its economy. Nearly one-half of the most expensive part of map engraving—the *bachurs* upon the mountain sides—is dispensed with, and the additional work, the ruling, is attended with little cost.³

This method of mapmaking, which apparently originated with Egloffstein, was certainly calculated to produce beautiful maps, but whether from difficulty or no, it did not take hold, and was not in any event capable of being executed in lithography—the coming method of map production. The older method was to be used, for the most part, until the invention of contouring came into play at the close of our period of investigation.³

The "Sketch of the Navajoe Country" drawn by First Lieutenant W. D. Whipple, Third U. S. Infantry, "Topographical Officer, Navajoe Expedition," is a manuscript map now in the National Archives. This

1858 WHIPPLE, W. D.

was an entirely different officer from the A. W. Whipple who had led the railroad expedition on the thirty-fifth Parallel, but it is an excellent map, so far as it goes. It shows in the west the Moqui (Hopi) towns, and the "Grazing Ground of the Navajoes" is outside (just west of) the "Boundary line of the Navajoe Country as fixed by the Meriwether Treaty." In the east, there is the "Boundary of the Navajoe Country as fixed by the conditions of pact as concluded by Col. Drummond and Col. Collins 1858," running north from the wheatfields of the Zuñis, slightly west of the pueblo of Zuñi, northeast from Bear Spring and northeast from Escondido on an unnamed stream and eventually striking the San Juan River at the mouth of the same unnamed stream. But another dashed line runs northeast from near the point west of Zuñi past Zim Zim, on the road from Fort Defiance to Albuquerque, to the Ojo Amarillo on the Cañada del Ojo Amarillo, a branch of the San Juan. This map is of interest as showing these boundaries, and their position relative to Fort Defiance, Zuñi and Pass Washington. It also shows Cañon de Chelly,

³I fear that our reproduction will not allow us to see the ruling, for it is very fine. But our reproduction will afford us an opportunity to see the beauty of the results. Egloffstein was without doubt a genius, and it was the lithographers who defeated his plan.

One example of contouring is encountered on a map of the *Pacific Railroad Reports*, and it had been used occasionally for maps of small area, but it was not for many years to be adopted for maps of such great area as this, and then only by the government.

Mapping the Transmississippi West

northwest of Fort Defiance.

(952) In the writer's collection is an original map, bearing no title and drawn on tracing cloth, extending between the South Pass and the Pacific and between Benicia (and the head of Sevier River) and Puget Sound (and the upper Missouri River). Rivers and lakes are colored blue and roads red. Many misspellings occur. For example "Gold Cannon," "Baytown" (instead of Ragtown), "Capt. Cunison's Massacre," the "Des Chuttes" River and the "Three Tetoons." But its showing of the road from South Pass to Fort Dalles on the Columbia, and from Great Salt Lake City, both north and south of the lake, across to California with two routes labeled "Col. Steptoe's Proposed Route," and to Oregon from Lassen's Meadows on the Humboldt, is excellent. In the northeast corner of the map is a "Table of Distances from Vancouver Depot to Great Salt Lake City U[tah]. T[erritory]." showing a total distance of 788 miles, the distance that supplies go by water being 187 miles.

The provenance of this tracing is unknown. It resembles the lithographed maps of the era and its misspellings are such that presumably an ignorant copyist was responsible for its production. What it shows as the routes of supply of the various army posts in California, Southern Oregon, and Washington (at Fort Vancouver) leads one to believe that this may have been intended as an illustration to some army report.

(945) A similar map submitted by Captain R. Ingalls, Assistant Quartermaster, is preserved (in a copy made in the Bureau of Topographical Engineers) in the National Archives, the Table of Distances being outside the map. It was connected with the Report of Brigadier General W. S. Harney, Commanding the Department of Oregon, on November 29, 1858.

(959) The "Map of the lines of March passed over by the troops of the United States during the year ending June 30th 1858" is of interest here as showing considerable activity on the part of the troops. From Omaha to Salt Lake City and from Fort Leavenworth to Bent's Fort and beyond, and throughout Texas the lines representing lines of march go. An interesting such line running from Fort Bridger across country to Fort Massa-