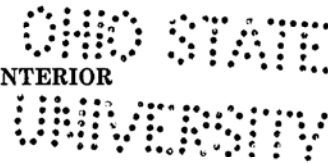


UNITED STATES DEPARTMENT OF THE INTERIOR

Harold L. Ickes, Secretary

GEOLOGICAL SURVEY

W. C. Mendenhall, Director



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GUIDEBOOK  
OF THE  
WESTERN UNITED STATES

PART F. THE SOUTHERN PACIFIC LINES  
NEW ORLEANS TO LOS ANGELES

BY

N. H. DARTON



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The valley fill here is thick, for borings 1,530 to 1,730 feet deep, for water, appear not to have reached bedrock, unless "hard beds" in the lower 550 feet are Tertiary or Cretaceous. In the surrounding region there is a succession of older beds of gravel and sand <sup>61</sup> which are mostly tilted and in places faulted. They are overlapped unconformably by the later sand and gravel that floor the valley. There are excellent exposures of these relations on the slopes of the Gila Bend Mountains near Woolsey Well, 15 miles northwest of Gila Bend, and farther west at the north end of the Gila Bend Mountains west of Dome.

As the Gila Valley below Mesa is filled with a thick mass of alluvium underlain in part by sandstone of Tertiary age, it is evident that the region was 1,000 feet or more higher when the valley was being excavated than it is now, and it has sunk to its present level as the younger formations were deposited. Possibly this loading was the cause of the sinking, but more likely it was due to some widespread crustal movement. A notable feature revealed by the logs of deep borings in the valley is a deposit of clay of wide extent, with a maximum thickness of 860 feet at Gila Bend. This clay must have been deposited in quiet waters, such as those of a lake or estuary that continued for a long period of time. The deposition of clay was followed by the accumulation of coarser material spread by streams, and since that time terraces higher than the present bottom lands have been developed. In places these later deposits were flooded by lavas, through which the present river trench has been excavated nearly 100 feet. From the historical record the Gila River channel has changed materially in a century or less. When it was originally discovered there was a well-defined channel with hard banks sustaining cottonwoods and other trees and plants. The current was swift and deep in places, so that the stream could be navigated by flat boats of moderate size, and it contained sufficient fish to be relied upon as food for many Indians. It was reported also that the water was clear and sea-green, very different from the present muddy stream. Now the Gila River is depositing sediment in its lower part, and its braided course follows many narrow sand-clogged channels. Possibly these changes may be due partly to diverting and damming the water and to an increase of silt caused by the removal of forest and increased grazing in the higher region.

Irrigation has been practiced in this region for a very long time, for old Indian ditches are found near the Painted Rock Mountains below Gila Bend and at other places along the river flats. Irrigation was again started in a small way by settlers who came soon after the

<sup>61</sup> These older beds are in general correlated with the Temple Bar conglomerate of Lee and the Gila conglomerate of Gilbert. In places they include lava flows (basalt) which are tilted and faulted.

bimonthly stage line between San Antonio and San Diego was established in 1857. The area under cultivation was small, but it was increased somewhat in the early seventies, and continued intermittently until 1905, when a heavy flood destroyed most of the canals. Some of these canals have since been restored and new ones developed, but the principal enterprise now in operation is the utilization of water held by the Gillespie Dam, 20 miles north of Gila Bend. (See p. 219.)

The lower Gila River Valley figures prominently in the chronicles of many of the early explorers of Pimería Alta. When Kino explored this valley in 1699 and 1700 and Garcés in 1771 and later, they found many Indian rancherías and some irrigation, but the adjoining region was so inhospitable that it supported only a meager population. The Pimas and some Papagos dwelt on the banks of the Gila near the mouth of the Salt River, and these streams furnished water for considerable irrigation. The Maricopas, who were of Yuman stock, moved gradually up the Gila Valley, pausing at Gila Bend in Garcés' time and finally reaching the Phoenix region, where many now reside with the Pimas. The Yavapais or Apache-Mojaves lived in part in the region between the Colorado and Gila Rivers. In early days they were friendly to the whites, but after suffering various injustices they went on the warpath in 1868 and were troublesome for several years. Oatman Flat, on the Gila River a few miles northwest of Gila Bend, was the scene of an Apache attack in 1851, in which an emigrant named Oatman and his family were killed, except a young son who escaped and two daughters who were carried off. The girls were sold as slaves to some Mojave Indians, and one who survived was ransomed seven years later. This case attracted much attention and was the subject of a narrative<sup>62</sup> that had a large circulation.

North and northwest of Gila Bend the Gila River resumes its westerly course. The steep Gila Bend Mountains, which are in sight from the railroad for many miles, consist largely of granite with a thick succession of Tertiary volcanic rocks overlapping it on the west. These younger rocks are thick in Woolsey Peak in the center of the range, which is made up of light-colored lavas and some fragmental volcanic rocks. On the western extension of the range these rocks are capped by a thick sheet of dark-colored basalt, constituting prominent mesas. One of the highest and most extensive of these mesas is called Yellow Medicine Butte. About 14 miles north of Piedra station a large basalt-covered cuesta extends with a long slope to the Gila River, which swings north in order to pass between it and the north end of the Painted Rock Mountains. The railroad, on the other hand, passes near the south end of these mountains, near Piedra and Tartron sidings. The Painted Rock Mountains consist of lavas of Tertiary

<sup>62</sup> Stratton, R. B., Captivity of the Oatman girls and an account of the massacre of the Oatman family in 1851, San Francisco, 1857; New York, 1858.