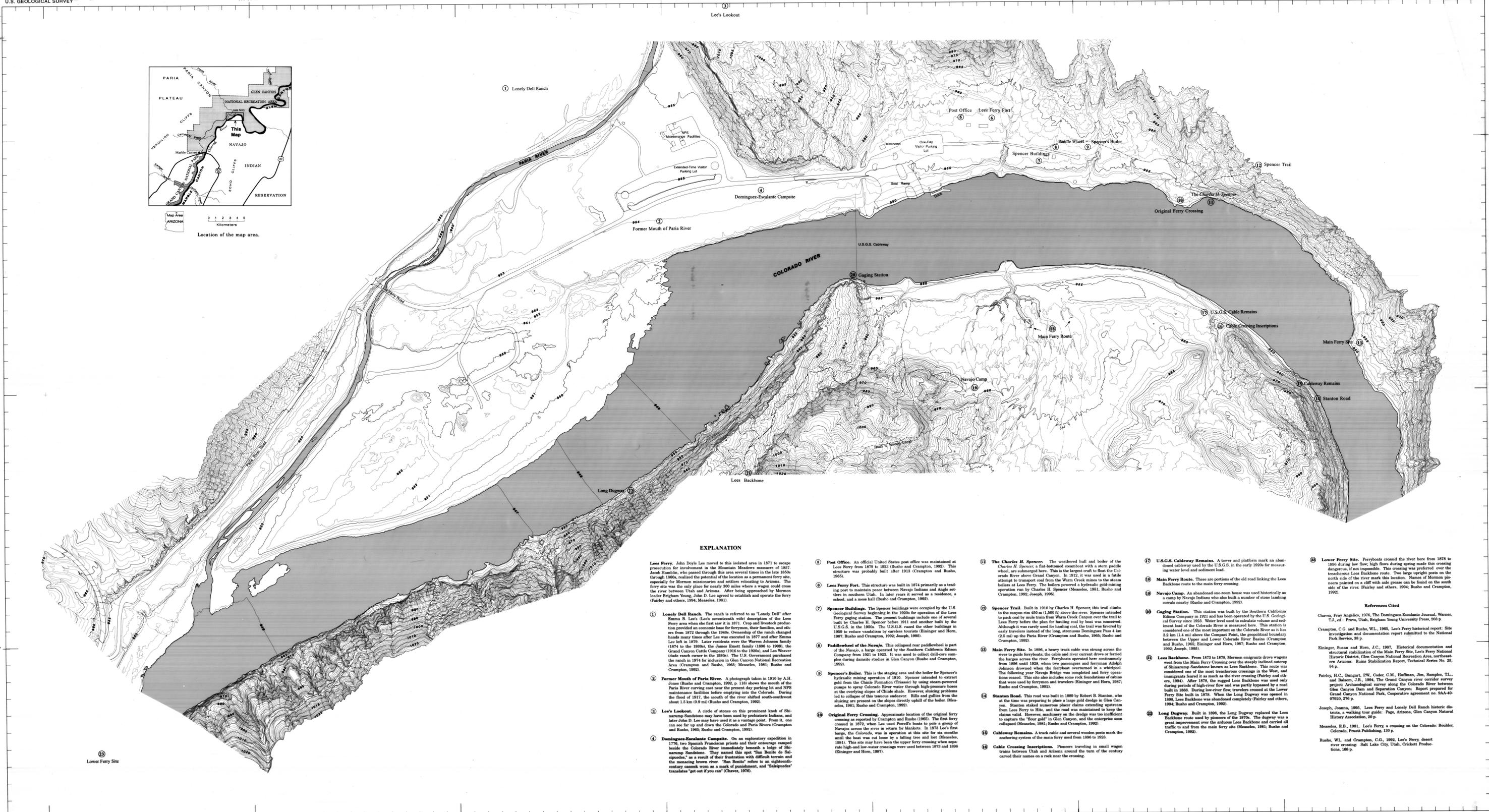


Location of the map area.



EXPLANATION

- 1. **Lonely Dell Ranch.** The ranch is referred to as "Lonely Dell" after Emma B. Lee's (Lee's aunt) description of the Lees Ferry area when she first saw it in 1871. Crop and livestock production provided an economic base for ferryman, their families, and others from 1872 through the 1890s. Ownership of the ranch changed hands many times after Lee was executed in 1877 and after Emma Lee left in 1879. Later residents were the Warren Johnson family (1874 to the 1890s), the James Ernest family (1896 to 1909), the Grand Canyon Cattle Company (1916 to the 1920s), and Leo Warner (sole ranch owner in the 1930s). The U.S. Government purchased the ranch in 1974 for inclusion in Glen Canyon National Recreation Area (Crampton and Rusbo, 1965; Mesasles, 1981; Rusbo and Crampton, 1992).
- 2. **Former Mouth of Paria River.** A photograph taken in 1910 by A.H. Jones (Rusbo and Crampton, 1992, p. 118) shows the mouth of the Paria River curving east near the present day parking lot and NPS maintenance facilities before emptying into the Colorado. During the flood of 1917, the mouth of the river shifted south-southwest about 1.5 km (0.9 mi) (Rusbo and Crampton, 1992).
- 3. **Lee's Lookout.** A circle of stones on this prominent knob of Shinarump Sandstone may have been used by prehistoric Indians, and later John D. Lee may have used it as a vantage point. From it, one can see far up and down the Colorado and Paria Rivers (Crampton and Rusbo, 1965; Rusbo and Crampton, 1992).
- 4. **Dominguez-Escalante Campsite.** On an exploratory expedition in 1776, two Spanish Franciscan priests and their entourage camped beside the Colorado River immediately beneath a ledge of Shinarump Sandstone. They named this spot "San Benito de Salapuedes," as a result of their frustration with difficult terrain and the meandering brown river. "San Benito" refers to an eighteenth-century canoe worn as a mark of punishment, and "Salapuedes" translates "get out if you can" (Chavez, 1976).
- 5. **Post Office.** An official United States post office was maintained at Lees Ferry from 1879 to 1923 (Rusbo and Crampton, 1992). This structure was probably built after 1913 (Crampton and Rusbo, 1965).
- 6. **Lees Ferry Fort.** This structure was built in 1874 primarily as a trading post to maintain peace between Navajo Indians and Anglo settlers in southern Utah. In later years it served as a residence, a school, and a mess hall (Rusbo and Crampton, 1992).
- 7. **Spencer Buildings.** The Spencer buildings were occupied by the U.S. Geological Survey beginning in the 1920s for operation of the Lees Ferry gaging station. The present buildings include one of several built by Charles H. Spencer before 1911 and another built by the U.S.G.S. in the 1930s. The U.S.G.S. rans the other buildings in 1969 to reduce vandalism by careless tourists (Eisinger and Horn, 1987; Rusbo and Crampton, 1992; Joseph, 1996).
- 8. **Paddlewheel of the Navajo.** This collapsed rear paddlewheel is part of the Navajo, a barge operated by the Southern California Edison Company from 1921 to 1923. It was used to collect drill-core samples during dam-site studies in Glen Canyon (Rusbo and Crampton, 1992).
- 9. **Spencer's Boiler.** This is the staging area and the boiler for Spencer's hydraulic mining operation of 1910. Spencer intended to extract gold from the Chinle Formation (Triassic) by using steam-powered pumps to spray Colorado River water through high-pressure hoses at the overlying slope of Chinle shale. However, slanting problems led to collapse of this tenuous endeavor. Rills and gullies from the slanting are present on the slope directly uphill of the boiler (Mesasles, 1981; Rusbo and Crampton, 1992).
- 10. **Original Ferry Crossing.** Approximate location of the original ferry crossing as reported by Crampton and Rusbo (1965). The first ferry crossed in 1873, when Lee used Powell's boats to pole a group of Navajos across the river in return for blankets. In 1873 Lee's first barge, the Colorado, was in operation at this site for six months until the boat was cut loose by a falling tree and lost (Mesasles, 1981). This site may have been the upper ferry crossing when separate high-and low-water crossings were used between 1873 and 1898 (Eisinger and Horn, 1987).
- 11. **The Charles H. Spencer.** The weathered hull and boiler of the Charles H. Spencer, a flat-bottomed sternboat with a stern paddle wheel, are submerged here. This is the largest craft to float the Colorado River above Grand Canyon. In 1912, it was used in a futile attempt to transport coal from the Warm Creek mines to the steam boilers at Lees Ferry. The boilers powered a hydraulic gold-mining operation run by Charles H. Spencer (Mesasles, 1981; Rusbo and Crampton, 1992; Joseph, 1996).
- 12. **Spencer Trail.** Built in 1910 by Charles H. Spencer, this trail climbs to the canyon rim 450 m (1,500 ft) above the river. Spencer intended to pack coal by mule train from Warm Creek Canyon over the trail to Lees Ferry before the plan for hauling coal by boat was conceived. Although it was rarely used for hauling coal, the trail was favored by early travelers instead of the long, strenuous Dominguez Pass 4 km (2.5 mi) up the Paria River (Crampton and Rusbo, 1965; Rusbo and Crampton, 1992).
- 13. **Main Ferry Route.** In 1896, a heavy track cable was strung across the river to guide ferriboats, the cable and river current drove or ferried the barge across the river. Ferriboats operated here continuously from 1896 until 1928, when two passengers and ferryman Adolph Johnson drowned when the ferriboat overturned in a whirlpool. The following year Navajo Bridge was completed and ferry operations ceased. This site also includes some rock foundations of cables that were used by ferryman and travelers (Eisinger and Horn, 1987; Rusbo and Crampton, 1992).
- 14. **Stanton Road.** This road was built in 1889 by Robert B. Stanton, who at the time was preparing to place a large gold dredge in Glen Canyon. Stanton sketched numerous placer claims extending upstream from Lees Ferry to Hite, and the road was maintained to keep the claims valid. However, machinery on the dredge was too inefficient to capture the "sour gold" in Glen Canyon, and the enterprise soon collapsed (Mesasles, 1981; Rusbo and Crampton, 1992).
- 15. **Cableway Remains.** A track cable and several wooden posts mark the anchoring system of the main ferry used from 1868 to 1928.
- 16. **Cable Crossing Inscriptions.** Pioneers traveling in small wagon trains between Utah and Arizona around the turn of the century carved their names on a rock near the crossing.
- 17. **U.S.G.S. Cableway Remains.** A tower and platform mark an abandoned cableway used by the U.S.G.S. in the early 1920s for measuring water level and sediment load.
- 18. **Main Ferry Route.** These are portions of the old road linking the Lees Backbone route to the main ferry crossing.
- 19. **Navajo Camp.** An abandoned one-room house was used historically as a camp by Navajo Indians who also built a number of stone lambling corrals nearby (Rusbo and Crampton, 1992).
- 20. **Gaging Station.** This station was built by the Southern California Edison Company in 1921 and has been operated by the U.S. Geological Survey since 1923. Water level used to calculate volume and sediment load of the Colorado River is measured here. This station is considered one of the most important on the Colorado River as it lies 2.3 km (1.4 mi) above the Compact Point, the geopolitical boundary between the Upper and Lower Colorado River Basins (Crampton and Rusbo, 1965; Eisinger and Horn, 1987; Rusbo and Crampton, 1992; Joseph, 1996).
- 21. **Lees Backbone.** From 1873 to 1878, Mormon emigrants drove wagons west from the Main Ferry Crossing over the steeply inclined outcrop of Shinarump Sandstone known as Lees Backbone. This route was considered one of the most treacherous crossings in the West, and immigrants feared it as much as the river crossing (Fairley and others, 1994). After 1878, the rugged Lees Backbone was used only during periods of high-river flow and was partly bypassed by a road built in 1888. During low-river flow, travelers crossed at the Lower Ferry Site built in 1878. When the Long Dugway was opened in 1898, Lees Backbone was abandoned completely (Fairley and others, 1994; Rusbo and Crampton, 1992).
- 22. **Long Dugway.** Built in 1898, the Long Dugway replaced the Lees Backbone route used by pioneers of the 1870s. The dugway was a great improvement over the arduous Lees Backbone and carried all traffic to and from the main ferry site (Mesasles, 1981; Rusbo and Crampton, 1992).
- 23. **Lower Ferry Site.** Ferriboats crossed the river here from 1878 to 1898 during low flow; high flows during spring made this crossing dangerous, if not impossible. This crossing was preferred over the treacherous Lees Backbone route. Two large upright posts on the north side of the river mark this location. Names of Mormon pioneers pointed on a cliff with axle grease can be found on the south side of the river (Fairley and others, 1994; Rusbo and Crampton, 1992).

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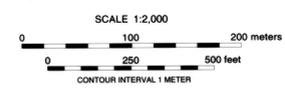
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Compiled by Photogrammetry Section, Branch of Astrogeology, Flagstaff, Arizona  
Based on aerial photography of 30 May 1993, approximate scale 1:4,500  
Water flow at approximately 226 m<sup>3</sup>/s



TOPOGRAPHIC MAP SHOWING HISTORIC FEATURES OF THE LEES FERRY AREA, MARBLE CANYON, ARIZONA

by  
Kathryn S. Thompson, Richard Hereford, and Kelly J. Burke  
1995

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.