NPS Form 10-900
(Rev. 8-86)

1593

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

AUG 3 1 1989

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Hulk of Charles H. Spencer
other names/site number Steamboat Charles H. Spencer

2. Location

street & number On the Colorado River ☐ not for publication
city, town Lees Ferry ☒ vicinity
state Arizona code AZ county Coconino code 005 zip code

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☐ private	☐ building(s)		buildings
☐ public-local	☐ district		sites
☐ public-State	☒ site		sites
☒ public-Federal	☒ structure	1	structures
	☐ object		objects
			Total

Name of related multiple property listing:
Lees Ferry Historic District

Number of contributing resources previously listed in the National Register 1

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of certifying official — Date: 8/28/89

National Park Service
State or Federal agency and bureau

In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of commenting or other official — Date: Aug. 8, 1989

Arizona State Historic Preservation Office
State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

☒ entered in the National Register. ☐ See continuation sheet. — 10/15/89
☐ determined eligible for the National Register. ☐ See continuation sheet.
☐ determined not eligible for the National Register.
☐ removed from the National Register.
☐ other, (explain:) _____

Signature of the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
Transportation: Water	Not in use

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)
N/A	foundation N/A walls N/A N/A roof N/A other N/A N/A

Describe present and historic physical appearance.

The hulk of the sternwheel steamboat Charles H. Spencer lies [redacted] located within Glen Canyon National Recreation Area in Northern Arizona near the Utah border. The vessel lies [redacted] which was listed in the National Register in 1976. While part of the district, the steamboat remains comprise a significant entity worthy of separate documentation and listing. Charles H. Spencer was subjected to detailed archeological analysis and assessment by members of the National Park Service Submerged Cultural Resource Unit in September 1986; this nomination is based on the results of that effort.

CHARLES H. SPENCER AS BUILT

As built in 1911, Charles H. Spencer was a wooden-hulled sternwheel steamboat 70 feet long, with an overall length of 85 feet, 6 inches. Spencer had a 20-foot beam and a 4.0-foot depth of hold. The vessel was capable of carrying 100 tons. [1] Charles H. Spencer was a shallow-draft vessel built with a flat bottom, hard chine, square stern, and twin rudders; the single-framed hull was reinforced with hogging trusses to support the weight of the machinery and the heavy coal cargoes Spencer was intended to carry. The steamboat additionally was built with a single keelson, two side keelsons, and an overhanging guard. A deckhouse extending for much of the main deck but open amidships housed the boiler forward and the engines aft and supported a Texas Deck. The Texas Deck supported cabins aft and the pilothouse forward; the stack was located immediately abaft the pilothouse. Charles H. Spencer was unpainted.

[X] See continuation sheet

Charles H. Spencer's sternwheel was powered by twin slide-valve high pressure steam engines 8-inches in diameter with 40-inch stroke mounted aft. The horsepower of the engines is unknown. Steam was provided by a single cylindrical coal-fired fire-tube boiler mounted forward near the bow. Steam and feed lines ran fore and aft, connecting the boiler and engines; a wooden pitman connected the engines to the 12-foot diameter, 12-foot wide sternwheel. [2]

REMAINS OF CHARLES H. SPENCER

The remains of Charles H. Spencer lie offshore on a coarse sand and silt bottom. [redacted] influences the depth of water at the site; during normal periods of release, the wreck is submerged in 2 to 3 feet of water near the bank and 15 to 18 feet along the vessel's starboard beam. During low flows of water, as much as two-thirds of the vessel is dry and accessible to pedestrians.

The vessel's hull from stem to stern is substantially intact to the main deck; the superstructure is now gone. Clear-cut samson posts indicate salvage of the superstructure prior to the vessel's sinking. Charles H. Spencer lists to starboard and stern first. The hull is silted in and partially buried. The starboard hull is punctured by a boulder; this is probably the damage that sank the abandoned steamboat. There is a limited area of wreckage scatter comprised of hull planks, hogging trusses, and steel pipes; the site extends some 90 by 60 feet in a northwest-southeast direction, covering an area of 5,400 square feet or approximately 1/8th of an acre. [3]

The hull contains much of the machinery and scattered structural elements. The stem has a 3x3/8-inch metal guard attached; the deadwood, remnants of the towing bitts, and the intact port and starboard beams of the hull, complete with frames, stubs of the samson posts, the towing bitt, the sternwheel guard, rudder, and much of the main deck and guards comprise the major component of the wreck site. Turnbuckles and truss rods from the hogging trusses are also present in the hull, as are the boiler, which has unseated and lies at the bow against the gunwale.

Much of the sternwheel assembly remains in situ on the wreck. The major components of the assembly include the cylinder

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timbers, which support not only the engines but also extend outward from the stern to support the sternwheel, the pitman, crank, pillow block and cap, sternwheel shaft, paddles, and the wheel guard. The pitman, which connected the engines and the cylinder shafts, is a 5-inch wide timber reinforced by a steel strap through-bolted to insure stability. The pitman is connected to the crank by an extension of this iron strap. The 3-foot iron crank is in place along with the brass pillow block. The shaft for the sternwheel rests on the pillow block; all three hubs are intact and the stubs of several wooden arms are in place in the sockets of the hubs. [4]

The boiler, while unseated, is largely intact and in good condition. Fire bricks stamped "N.C. & S." line the firebox, and pieces of coal remain. Some scattered fire bricks lie on the bottom off the starboard side of the wreck. Near the bricks lies the metal flanged collar that protected the deck from heat where the stack passed through. The engines remain in place, but are largely buried in the silt. The pre-heater lies on the starboard side of the wreck; near it is the throttle, which is attached to a 16-foot length of 3-inch steam pipe. Another piece of machinery is a Hooker No. 3 bilge pump, which lies on the bottom still attached to broken wood decking bolted to the pump's base. Miscellaneous wreckage scattered in the vicinity includes broken wooden planking, sections of decking, disarticulated sections of 1-inch diameter steel pipe, and a samson post cap. [5]

Charles H. Spencer's general state of preservation was described in 1986:

> The wood used in the construction of the vessel remains hard and well preserved below the level of water fluctuations. Piping, truss rod, turnbuckles, paddle wheel hubs, and the machinery are all in good condition. All the metal observed on the site has a small amount of encrustation. This is expected and, in fact, has probably contributed to stabilization of these remains. A portion of the boiler and firebox, as well as wood in the bow, both exposed to wet-dry cycles, are in poor condition. Rusting of the boiler and firebox along with loss of some of the historic fabric, is evident. Several hull planks, present in 1962 and 1973 photos of the site, are gone from the bow. The silt which has buried the vessel up to the

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level of the main deck has contributed to its overall good condition. Algae, which is present in abundance on the site, has had no obvious detrimental effect on the vessel's preservation. [6]

NOTES

1
Toni Carrell, ed. Submerged Cultural Resources Site Report: Charles H. Spencer Mining Operation and Paddle Wheel Steamboat, Glen Canyon National Recreation Area. (Santa Fe, New Mexico: National Park Service Southwest Cultural Resource Center Professional Papers, 1986) pp. 106-107. Also see Harold S. Colton, "The Colorado River Steamboat Charles H. Spencer," Steamboat Bill, LXI (1957) pp. 6-7. The vessel was not documented and registry and enrollment papers are lacking. Vessel dimensions were obtained through archeological assessment and analysis of plans of the steamboat filed as part of a deposition in U.S. District Court.

2
Carrell op.cit, pp. 135-142, passim.

3
Ibid., p. 115.

4
Ibid., pp. 132-135.

5
Ibid., pp. 136-147.

6
Ibid., p. 153.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:
☐ nationally ☒ statewide ☐ locally

Applicable National Register Criteria ☒ A ☐ B ☒ C ☒ D

Criteria Considerations (Exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Commerce	1911-1912	1912
Industry	1911-1912	1912
Architecture (Naval)	1911-1912	1912
Transportation		

Cultural Affiliation: Anglo

Significant Person: Charles H. Spencer

Architect/Builder: James Robertson, Architect; Schultze, Robertson, Schultze, Builders

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The 1911-built sternwheel steamboat Charles H. Spencer's substantially intact remains are both an integral part of the [redacted] and a significant, separate entity. Constructed by the San Francisco firm of Schultze, Robertson, and Schultze, specifically by shipbuilder and engineer James Robertson, Charles H. Spencer is a largely-forgotten product of a regionally important builder whose better known products included the automobile passenger ferry Charles Van Damme, the first ferry built specifically to carry automobiles in the United States. Built for Charles H. Spencer, the sternwheeler was reassembled from a "knocked-down" hull to operate on the Colorado River as part of Spencer's plan to extract gold from Chinle shale. The steamboat's career was short, as was Spencer's operation, which was yet another failed prospecting venture in the area. Charles H. Spencer was the last steamboat built and operated for bulk transport on the Colorado River, terminating nearly 50 years of steamboating on the Colorado River. The remains of the steamboat are one of only four potential Colorado River steamboat archeological sites; Spencer's are the only remains archeologically documented to date. The study of Charles H. Spencer provided insights into a previously little documented vessel and demonstrated that the historical reasons for the vessel's abandonment, namely underpowered engines and inability to carry sufficient coal, were not true. Rather, the mining operation and operators were economic failures, and their failure led to the abandonment of Charles H. Spencer and the boat's subsequent sinking.

The preceding statement of significance is based on the more detailed statements that follow.

☒ See continuation sheet

THE PLACE OF CHARLES SPENCER'S MINING OPERATION IN LEE'S FERRY HISTORY

During the last two decades of the 19th century, a minor gold rush ran its course along the Colorado River and its tributaries. While many prospectors passed through the region and found gold literally everywhere they looked, the gold was embeded in sedimentatry rocks in such minute amounts that there was simply no way to extract the gold in commercial quantities without massive equipment. [1] Toward the end of the 19th century, the prospectors moved on, leaving the mining in the hands of entrepreneurs with investors, payrolls, and heavy equipment. One such man was Charles Harvey Spencer, a Colorado prospector and miner who had worked various claims in the San Juan-Glen Canyon area since 1893.

In 1908 Spencer had amassed enough investment capital to begin his own mining operation on the San Juan River. His venture failed, but Spencer found new investors, and in 1909 established a crusher and amalgamator at Paria Creek, 125 miles above Lee's Ferry on the Colorado River. First trying Wingate sandstone, Spencer's engineers shifted their attention to Chinle shale, a soft, crumbly gold-rich stone that was easily sluicable. Since Chinle was found in large amounts at Lee's Ferry, Spencer shifted his operation there, setting up the equipment in May, 1910, some 250 yards of from the river at the base of shale cliffs. Lee's Ferry, first developed as a crossing and trading post in 1874, had been the site of numerous ventures in the 33 years prior to Spencer's arrival. It now reached the apex of its development.

Charles Spencer made several improvements in the area. A large boiler and steam-driven pumps were set up near the river and water was pumped to the cliff, where high-pressure monitors sluiced the shale into the amalgamator. Several stone buildings were also constructed; three bunkhouses, a mess hall/kitchen, cook's house, laboratory, and blacksmith shop were built between 1910 and 1912.

Spencer's operation ultimately failed. The presence of rhenium in the ore clogged the amalgamator plates, and most of the gold was sluiced out instead of being recovered. The value of the mercury used in the amalgamator was higher than that of the gold recovered. Dissatisfied investors and employees left, and by the summer of 1912, Spencer's operation had shut down. Spencer and

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his crew departed, but the buildings, equipment, and steamboat remained behind, and sporadic mining activity continued in the area well into the 1950s. [2]

THE PLACE OF THE STEAMBOAT CHARLES H. SPENCER IN COLORADO RIVER MARITIME HISTORY

Historically the Colorado, Sacramento, San Joaquin, and Columbia river systems were the principal thoroughfares for settling and developing the interior regions of the west. From 1849 until the first decade of the 20th century, sternwheel, shallow draft steamboats provided cheap and efficient transportation on the rivers. While the initial area of steamboat development was California's Sacramento and San Joaquin rivers, the Gold Rush of 1849 also spurred steamboat service on the Colorado. That year a ferry crossing was established on the Colorado River at Yuma. In 1851 the US Army built and garrisoned Fort Yuma, and in 1853 introduced the first steamboat on the Colorado, the 65-foot Army steamer Uncle Sam.

From the pioneer trips of Uncle Sam, steamboat service boomed on the Colorado as settlements up the river were established in rapid succession:

> Before the 1850s passed, steamboating over this 150-mile stretch of river had assumed a regular schedule, and there had even been some exploratory steamboat navigation above the fort. Initiated as a means of supplying the military at Yuma, other opportunities for trade subsequently developed. Mormons in the Utah territory, in their efforts to import needed supplies, saw in this riverboat trade an opportunity to connect a...water freighting route with wagon freighting lines from west coast points. Mineral developments in Southern Arizona also served as a stimulus as did the hauling of Army supplies and such produce as wool, hides, pelts, farm machinery, household commodities, newsprint, and general dry goods. [3]

Colorado River navigation was further aided by the large scale mining operations along its banks. Ore was loaded in river steamers and freighted to Yuma, where it was shipped by rail to San Francisco, where the Pacific Coast's first smelters, operated by Thomas Henry Selby, refined Colorado silver and copper, California gold, Nevada silver, and the ores of Arizona and Utah.

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While steamboating declined on the Colorado after 1877, the repeal of the Sherman Silver Act in 1893 and the collapse of silver prices lured gold prospectors back to the region. Many of their mining operations depended upon river transportation, and as a result steamboats once again appeared on the Colorado, supplemented after 1900 (also the peak year of steamer operation, with 10 vessels in service) by gasoline-engined craft. [4]

CONSTRUCTION AND CAREER OF CHARLES H. SPENCER

The need for an adequate coal supply for the steam-powered pumps at Lee's Ferry led to the construction of a trail to a coal mine on Warm Creek and a barge to raft the coal downriver. The problem of how to get the barge back up stream to the mouth of Warm Creek was thought to be solved by the purchase of the launch Violet Louise. Unfortunately, the launch was not sufficiently powered to push the barge against the current. The problem was solved when Spencer, acting at his investors' request, ordered a steamboat from the San Francisco shipbuilding firm of Schultze, Robertson, Schultze in late 1911. A sternwheel steamboat was designed and built by the company. Framed up, temporarily pinned together, dismantled, and shipped to mouth of Warm Creek, the steamboat was largely the product of James Robertson and Herman Rosenfelt.

San Francisco-born James Robertson served as secretary, designer, and manager at Schultze, Robertson, Schultze's South San Francisco shipyard. Apprenticed at age 13 to San Francisco's Union Iron Works, preeminent iron and steel shipbuilder of the Pacific Coast, Robertson also learned the art of wooden shipbuilding at the noted Puget Sound shipbuilding Hall Brothers' yard. In 1894, Robertson returned to San Francisco and began work at Union Iron Works. In 1903, Robertson was sent as a naval engineer to Vladivostock to supervise the construction of caissons for the drydocks of the Imperial Navy Yard. Robertson left the employ of Union Iron Works when the job was completed, worked for the firm of Clarkson & Co., and returned to San Francisco in 1906, where he purchased a portion of the San Francisco yard of Schultze and Schultze.

As managing partner of the yard, now renamed Schultze, Robertson, Schultze, James Robertson designed and supervised the construction of a number of ferries and riverboats, among them Charles Van Damme, the first ferry built in the United States

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from the keel up to carry passengers and automobiles. Robertson dissolved his partnership with the Schultze brothers in 1912 when he purchased the Matthew Turner shipyard in Benicia, California. There he continued his career, building barges and a number of the Pacific Coast's larger sailers, including the 4-masted schooners LaMerced and Orinite and the 5-masted schooner Rose Mahoney. Selling his yard in 1918, Robertson relocated to Alameda, where he continued in business until accidently killed while moving heavy machinery in 1927. [5]

Herman Rosenfelt, the Schultze, Robertson, Schultze company shipwright put in charge of construction of Charles H. Spencer, erected the steamboat's frames in July, 1911. One month later the framing and pinning of the vessel was completed, and the steamer was knocked down, packed into two 40-foot boxcars, and sent by rail to Marysville, Utah. There, the steamboat parts were freighted by wagon to Warm Creek. Several trips averaging two to three weeks each were required; on one, the wagon carrying the steamboat's boiler fell over a ledge and rolled down a steep slope, requiring a lengthy and difficult recovery. [6] By late October-early November 1911, all of the parts were on hand, and under Herman Rosenfelt's supervision the job of reconstructing the steamboat began. The work was described in November by a visiting group of photographers:

> We rowed about 20 miles down the river before we learned what had caused the noises heard in the morning. On rounding a turn we saw the strange spectacle of 15 or 20 men ~~men~~ at work on the half-constructed hull of a flat-bottomed steamboat, over 60 feet in length. This boat was on the bank quite a distance above the water, with the perpendicular wall of a side canyon rising above it. It was a strange sight, here in this out-of-the-way corner of the world. Some men with heavy sledges were under the boat, driving large spikes into the planking. This was the noise we had heard in the morning. [7]

The work was completed within a few months, and sometime around the end of February 1912, the boat, christened Charles H. Spencer, was launched.

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The number of trips made by the steamboat is not clear. The available evidence indicates that Charles H. Spencer made two-and-a-half trips between Warm Creek and Lee's Ferry, running with a load of coal averaging 5 to 6 tons before steaming back up the river to Warm Creek. By this time, however, the mining operation was failing, and Charles H. Spencer, though apparently suited for the river and her trade, was laid up [redacted] in the late spring or early summer of 1912. [8] The reason for the lay-up was erroneously ascribed to the steamer being underpowered, but that charge was correct only for the launch Charles H. Spencer replaced. Archeological assessment of the sunken steamboat shows her to be sufficiently powered and constructed for her service on the Colorado River.

Driftwood piled up around the laid-up vessel, shifting the steamer to starboard by 1915. Sometime between 1915 and 1929, but perhaps after 1929, high water lifted Charles H. Spencer off the driftwood and slid her sideways, where a large boulder punctured the hull and sank the steamboat. At an undetermined time, the superstructure was salvaged, but the machinery was not. The hull of the steamboat remained visible at low water, where it was photographed in 1959, 1963, and 1973. The remains were measured in 1963, and in 1981 National Park Service personnel performed basic level documentation of the wreck. [9] In September 1986, a detailed reconnaissance and survey by National Park Service and Bureau of Reclamation personnel documented the visible and submerged remains of the vessel.

NOTES

1
C. Gregory Crampton, Outline History of the Glen Canyon Region. University of Utah Anthropological Papers, Number 42. (Salt Lake City: University of Utah, 1959) p. 23.

2
Toni Carrell, ed. Submerged Cultural Resources Site Report: Charles H. Spencer Mining Operation and Paddle Wheel Steamboat. Glen Canyon National Recreation Area (Santa Fe, New Mexico: National Park Service Southwest Cultural Resources Center Professional Papers, 1986) pp. 8-14, passim.

SEE CONTINUATION SHEET

3
Oscar Osbun Winther, The Transportation Frontier: The Trans-Mississippi West, 1865-1890. (New York: Holt-Rinehart-Winston, 1964) pp. 82-83.

4
Richard E. Lingenfelter, Steamboats on the Colorado River, 1852-1916 (Tucson: University of Arizona Press, 1978) pp. 95, 118.

5
Russell Robertson, "History of the Robertson Family," (1961) unpublished manuscript, J. Porter Shaw Library, San Francisco Maritime National Historical Park.

6
The United States vs. Utah, United States Supreme Court, October Term, 1929. Transcript of testimony of Herman Rosenfelt, Volume 16, pp. 3006-3014.

7
Ellsworth L. Kolb, Through the Grand Canyon from Wyoming to Mexico (New York: The MacMillan Co., 1914), pp. 169-175.

8
United States vs. Utah, 1929, Transcript of testimony of Herman W. Freeze, Volume 1, pp. 686-689.

9
Carrell, op.cit, pp. 107-112.

9. Major Bibliographical References

Please see footnotes cited in text of the nomination.

☐ See continuation sheet

Previous documentation on file (NPS):
- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☒ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey # _____
- ☐ recorded by Historic American Engineering Record # _____

Primary location of additional data:
- ☐ State historic preservation office
- ☐ Other State agency
- ☒ Federal agency
- ☐ Local government
- ☐ University
- ☐ Other

Specify repository: NPS Submerged Cultural Resource Unit

10. Geographical Data

Acreage of property 0.13 acre

UTM References

	Zone	Easting	Northing
A	[redacted]	[redacted]	[redacted]
B			
C			
D			

☐ See continuation sheet

Verbal Boundary Description

[redacted]

☐ See continuation sheet

Boundary Justification

The boundary encompasses the entire area of the hull and scattered structural components of Charles H. Spencer determined through underwater archeological survey.

☐ See continuation sheet

11. Form Prepared By

name/title James P. Delgado, Maritime Historian and Toni Carrell, Archeologist
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