NPS Form 10-900
(3-82)

OMB No. 1024-0018
Exp. 10-31-84

United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

For NPS use only
received APR 9 1984
date entered MAY 16 1984

1. Name

historic (Schooner) WESTERN UNION

and/or common N/A

2. Location

street & number Pier A, Truman Annex N/A not for publication

city, town Key West N/A vicinity of

state Florida code 12 county Monroe code 087

3. Classification

Category	Ownership	Status	Present Use	
___ district	___ public	X occupied	___ agriculture	___ museum
___ building(s)	X private	___ unoccupied	___ commercial	___ park
___ structure	___ both	___ work in progress	X educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	X entertainment	___ religious
X object	___ in process	X yes: restricted	___ government	___ scientific
	___ being considered	___ yes: unrestricted	___ industrial	X transportation
	N/A	___ no	___ military	___ other:

4. Owner of Property

name World/Life Explorations, Inc.

street & number 222 Greene Street

city, town Key West N/A vicinity of state Florida

5. Location of Legal Description

courthouse, registry of deeds, etc. United States Coast Guard Documentation Office

street & number 801 Customs House

city, town Philadelphia state Pennsylvania

6. Representation in Existing Surveys

title N/A has this property been determined eligible? ___ yes X no

date N/A ___ federal ___ state ___ county ___ local

depository for survey records N/A

city, town N/A state N/A

7. Description

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	___ original site
_x_ good	___ ruins	_x_ altered	_x_ moved date _____
___ fair	___ unexposed		

Describe the present and original (if known) physical appearance

The 130-foot wooden vessel WESTERN UNION is an auxiliary coasting schooner launched at Key West, Florida, on April 7, 1939. The WESTERN UNION typifies and is a prime example of the traditional American coasting schooner, a type and form prevalent in U.S. shipbuilding from 1800 to 1939 when this vessel, the last true example, was built. The original appearance of the hull is unaltered. Constructed of madiera framing, the keel, deck beams, planking and decking are of long-leaf yellow pine. The two-masted schooner has a clipper bow and an overhanging counter at the stern. Her basic dimensions are as follows: Length on deck: 92 feet; Length Water Line: 86 feet; Length Overall: 130 feet; Extreme Beam; 23 feet, 6 inches; Height of Main Topmast Truck: 94 feet.

The schooner WESTERN UNION is an auxiliary coasting schooner of heavy wooden carvel construction which was launched at Key West, Florida, on April 7, 1939. It is typical of the "Chesapeake" type of American coasting schooner which predominated in the coasting and cargo trades between 1800 and 1939. The schooner was employed to maintain and repair undersea telegraph cables in the Gulf of Mexico, the Caribbean and adjacent waters from 1939 until 1973. This work was done with bolt-on equipment which at no time required the structure of the vessel to be changed for such work. The schooner was berthed at Key West, Florida.

The WESTERN UNION appears much today as she did when launched. She carried two masts with fore-and-aft gaff-headed sails on each mast plus 3 headsails on the forward stays. Construction is of madiera framing in double-sawn sets with a long-leaf yellow pine keel, deck beams, planking and decking. She has a "clipper" bow and an overhanging counter at the stern. Deck structures include a foc'sle companionway, "caboose" galley, main cargo hatch, engine room companionway, great cabin trunk and lazarette hatches. Below deck the WESTERN UNION has a chain locker, foc'sle, cargo hold (with temporary berths for 20 persons), engine room, great cabin and lazarette. The vessel carries twin diesel auxiliary propulsion.

The original paint colors have been retained or duplicated. All paint and varnish is replaced on a regular schedule. Only the varnished undersides of the overhead beams in the great cabin retain the original coating. The hull is painted white with a black sheer stripe and black boot toppings. The cabin and companionway tops are buff and cap rails are cream colored.

The exterior appearance of the hull of the WESTERN UNION has never been altered. The original appearance of the schooner itself remains unchanged with two exceptions: the original galley "caboose" has been replaced by one which is somewhat larger, and the cargo hatch is covered by a companionway for passengers. The hatchway is scheduled to be restored to its original configuration with traditional hatch board and a canvas cover in 1983. The original interior layout remains unaltered, except for the addition of temporary berthing in the cargo hold. (This addition is scheduled to be removed, leaving the cargo hold intact for general cargo.) The original interior bulkheads were of "joiner" construction. The original "joiner" bulkheads between compartments below deck have been replaced with new watertight bulkheads which appear like the originals and are faced with original lumber and are in the original location.

Bolt-on cable handling equipment (installed in 1961) has been removed, leaving the schooner intact as built. As this equipment was bolted to the deck, no structural changes either in installing it or removing it were required or made. This equipment, being of "modern" design, was the only thing which detracted from the original form of the schooner, and was removed in order to restore the original deck layout and appearance, which is that of the American coasting schooner.

8. Significance

Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion	
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science	
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture	
___ 1600–1699	___ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	___ engineering	___ music	___ theater	
___ 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation	
_x_ 1900–	_x_ communications	___ industry	___ politics/government	_x_ other (specify)	
		___ invention		Naval Architecture	

Specific dates 1939 **Builder/Architect** Herber Elroy & Loxley Arch

Statement of Significance (in one paragraph)

Constructed in 1939 as an undersea telegraph cable vessel, the WESTERN UNION is a rare extant example of the American Coasting Schooner, the first distinctive type of American-built and designed sailing craft. It was modelled after the 1886 GEORGE T. GARRISON and was built by two Grand Cayman Island brothers, Herber and Loxley Arch in Key West, Florida. The ship was leased to the Western Union telegraph company from 1939-73 and functioned to maintain the shore-to-shore communication links throughout the Caribbean area. She evolved from the "Chesapeake" variety of schooner and also incorporates the distinctive "Bahama Banks" trait of kingplanks.

The evolution of the sailing ship was a significant development in the history of American shipbuilding. The coasting schooner was the first distinctive type of an American-built and designed sailing craft. The WESTERN UNION is significant as a rare example of such an American coasting schooner and exemplifies the basic continum of design over a 200-year period. In terms of hull shape, rigging, layout below deck and fastenings, the WESTERN UNION is of the Chesapeake type of schooner. Her sailing rig is specifically Chesapeake with bowed masts and a stove-down bowspirit. The ship also incorporates a distinctive Bahama Banks trait: kingplanks, or thicker planting down the center of the deck. This detail is not typical of American schooners and further specialized the craft.

The WESTERN UNION was constructed in Key West in 1939 according to the terms of an agreement between the Thompson Fish Company of Key West and the Western Union Telegraph Company. The ship was built following a half-hull model; no drawings or plans were utilized by its Grand Cayman Island builders, Herber Elroy and Loxley Arch. The schooner was launched on April 7, 1939, and then leased to the Western Union Telegraph Company for the purpose of laying and maintaining undersea telegraph cables from Key West to Havana, Cuba. The ship continued in this service until 1974 and is the last remaining sailing ship built for this purpose.

A total of eleven telegraph cables were laid between Key West and Havana from 1867 to 1931. The WESTERN UNION played no part in laying the cables; rather, the cable ship was instrumental in the maintenance of what was then called the "southern group" of cables. According to Cable Ships and Submarine Cables, Cable 1, completed in 1867, was laid by NARVA for International Ocean Telegraph Company, and Cable 2 was finished in 1868 by the same company. In 1873 Cable 3 was laid by DACIA for the Western Union Telegraph Company, Cable 4 was laid in 1899, and Cables 5, 6, and 7 were placed in 1921 by the ship COLONIA. Cables 8, 9, and 10 were laid in 1923 by AT &T's STEPHAN and Cable 11 was laid in 1931. In 1873 the Western Union Telegraph Co. took over nine of the above cables which were still in service. These were maintained by the WESTERN UNION from 1939 to 1973.

In 1950 a telephone cable was laid from Key West to Havana. While the WESTERN UNION did not lay that cable, she did maintain it. The WESTERN UNION had a part in testing this new kind of cable which was used after proving itself for the first transatlantic telephone cable. The cable utilized a repeating system that restored the quality of the signal to the original. Later the same type of cable was utilized for downrange missle tracking stations out of Cape Canaveral, which the WESTERN UNION helped lay at the shallow shore ends.

(See Continuation Sheet)

9. Major Bibliographical References

(See Continuation Sheet)

10. Geographical Data

Acreage of nominated property less than 1 acre

Quadrangle name Key West **Quadrangle scale** 1:24,000

UTM References

	Zone	Easting	Northing
A	17	418150	2716020
B			
C			
D			
E			
F			
G			
H			

Verbal boundary description and justification The object itself is the nominated area.

Schooner WESTERN UNION

List all states and counties for properties overlapping state or county boundaries

state	N/A	**code**	N/A	**county**	N/A	**code**	N/A
state	N/A	**code**	N/A	**county**	N/A	**code**	N/A

11. Form Prepared By

name/title Sharon Wells/Michael Zimny, Historic Sites Specialist

organization Florida Division of Archives **date** April 2,1984

street & number The Capitol **telephone** (904) 487-2333

city or town Tallahassee **state** Florida

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national ___ state x local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature George W. Percy

title George W. Percy, State Historic Preservation Officer **date** 4/2/84

For NPS use only

I hereby certify that this property is included in the National Register

Carey T. Rose **date** 5/16/84

Keeper of the National Register

Attest: **date**

Chief of Registration

NPS Form 10-900-a
(3-82)

OMB No. 1024-0018
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The WESTERN UNION functioned as the primary cable repair ship for the southern group of cables. These included cables from Key West to Havana, Key West to Punta Rassa, Key West to Miami, Galveston to Tampico to Puerto, Mexico, and those to the Barbados. She was "on call" to depart within 24 hours to repair the cables of the Western Union Telegraph Company and other companies throughout the Gulf of Mexico, the northeast coast of South America and the Bahamas.

From time to time the WESTERN UNION was called upon to lay "inshore" ends of cables in shallow waters where larger, deeper draft cable ships could not go. Included in the "laying" jobs were the shore ends of cables connecting downrange tracking stations from Cape Canaveral east to San Salvadore. Additionally, some research and development work was accomplished in the testing of "multiple carriers" and updated types of "repeaters" for undersea cable.

During World War II, the duties of the WESTERN UNION remained unchanged. It was felt that her job was of prime interest and importance to national security and that, being a wooden sailing ship which could do her job quietly in the presence of enemy submarines, she was best suited to continue as usual. It is not known if any armament was put aboard. Crew identity was carefully checked by Navy, Coast Guard and U.S. Immigration agencies.

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Thurston, William. A Study of Maritime Activity in Florida in the Nineteenth Century. PH.D. Dissertation. Tallahassee: Florida State University, 1972.

Underhill, Harold A. Mastmaking and Rigging. Glascow: Brown & Ferguson, 1972.

Underhill, Harold A. Sailing Ship Rigs and Rigging. Glascow: Brown & Ferguson, 1969.

Villiers, Alan. Men, Ships and the Sea. Washington: National Geographic Society, 1973.

Villiers, Alan. The Way of a Ship. Camden, Inc.,: International Marine Publishing Co., 1938.

(See Continuation Sheet)

UNPUBLISHED MATERIAL

Adams, A.M. to N.W. Tracey. Letter, August 2, 1937. On file at the Historic Key West Preservation Board, Key West, Florida.

Adams, A.M. to A.L. Winn. Letter, February 1, 1939. On file at the Historic Key West Preservation Board, Key West, Florida.

Agreement between the Western Union Telegraph Company and Thompson Fish Co. August 29, 1932. On file at the Historic Key West Preservation Board, Key West, Florida.

Elroy, Heber and Loxley Arch. By H.E. Ross. Interview, Georgetown, Grand Cayman, 10 November, 1982.

Steadman, Capt. R.T. by John Kraus. Interview, Key West, Florida, 20 March 1980.

Thompson Fish Co., Inc., to N.W. Tracey Letter, September 9, 1938. On file at the Historic Key West Preservation Board, Key West, Florida.

Appendix I

PHOTOGRAPHS & DESCRIPTIONS

In photo #1, it is evident that the WESTERN UNION is flush-decked (the main deck being at one level with no raised or depressed portions). This was an item of significance in the evolution of the American coasting schooner which allowed long cargo, such as lumber, piles and the like to be carried on deck.

Also in photo #1, the two masts, on centerline with "fore-and-aft" sails on both masts are visible. This sail arrangement became known as the "schooner rig" around 1717. It became the choosen rig of the American coasters, and the rig of the WESTERN UNION is a prime example of the rig in general, with specific gear and fittings of the "Chesapeake" or "Southern" variety.

In photo #2, notice the "clipper" bow, a specific departure from the northern fishing schooners. This type of bow was an earlier innovation than the northern fisherman's "spoon bow."

In photos #3, and 3A, the masts are "raked" only a few degrees, as opposed to earlier types such as the "Baltimore Clippers" (See PRIDE OF BALTIMORE, a replica fast clipper type, built for speed, requiring a larger crew, and capable of carrying less cargo, though the length on deck is almost the same.) Also note that the masts, and especially the main topmast, are actually bent forward with rigging tension. This made a stronger, more stable rig and was made possible with the invention of wire rope and bottle screws for setting up, or "tuning" the rigging. Note here as well that only one topmast is carried--again, a difference between "northern" and "southern" type rigs.

In photo #4, the "sheer" (curve of the rail) is shallow compared to northern schooners. Note here the position of the galley "caboose."

In photo #5, note the boat davits. These are relatively low compared to most davits, where heavy "yawlboats," or pushboats, were carried. The WESTERN UNION, being powered, had no need to carry a large, heavy boat. Thus, her dingy can be carried on deck in heavy seas, making high davits unnecessary.

In photos #5 and #6, you can see a prime example of fancy ropework on the boat davits--a highly traditional occupation of sailing seamen throughout history to spend time at sea "servicing" parts of ships with ropework.

Photo #7. All sails aboard the WESTERN UNION are of cotton canvas and handmade by the crew and apprentices aboard. The present suit was made in 1982 here in Key West and is still a current project.

Photo #8. Wooden quarterbits were generally discontinued around 1800 in favor of patent iron cleats. As you see, some innovations were passed up in favor of earlier ones. In this case, it was due, most likely, to economic and/or practical (replacement) considerations.

In photo #9, you see a detail of the worm steering gear aboard the WESTERN UNION. This gear was taken off the ATKINS and put aboard the WESTERN UNION when she was built. Its exact vintage is not known, but this particular make of gear was introduced about 1850. The ATKINS was launched in 1886, and it is likely that this particular gear was new at that time. It is still in perfect working order and in used whenever the schooner is underway.

Photo #10 shows the compass binnacle which is of unknown origin. It has a serial number, and the name of a British company which we have not been able to make contact with. This binnacle was taken off the ATKINS as well, and was purchased sometime between 1932 and 1930 from Curry and Son's Chandlery in Key West. The original compass is still the main steering compass.

Photos #11, 12 and 13 show the great cabin companionway hatch. Frames, sill, and slides are of Madiera mahogany, as are the ship's frames. The doors have been replaced (1979). They are exact duplicates of the originals, which once again came off the ATKINS. Hinges and metal fittings are original.

In the great cabin, there are 7 ports (photo #14), which are bronze and came from the Curry and Son's Chandlery. These ports are probably wrecker's ware. (Interior detail of this port, photo #33).

Photo #15 shows the engineroom campanionway, the lower part of the mainmast, boom and gaff jaws and the "fife" rail around the mainmast. Note also, the "kingplanks" (thicker planking down the center of the deck) which was rarely raised as this is. Here is a detail which is not typical of American schooners, but of "Bahama Banks" shipbuilding, and further specializes the influence of Key West builders and shipwrights. (The master shipwrights who built the WESTERN UNION came from Grand Cayman).

The hand bilge pump detailed in photo #16 was introduced in 1876 by the Edson Manufacturing Company of Boston. This one was put aboard the WESTERN UNION when she was built and is still in use today.

Photo #17 shows a pair of details which are special to the WESTERN UNION. Note the stars cut in the ends of the foreboom and fore gaff. These are "yankee" evidence of tradition usually found only on northern types of schooners. Also note the sheeve cut into the end of the boom. This is for use in light winds where it is sometimes advantagous to set the sail "loose footed," a British (and early-American) detail which was rare in American schooners.

Lightboards (photo #18) are wooden, of traditional design, again form the ATKINS, and are on the main rigging rather than the forerigging where sailing ships without power usually carried their sidelights.

The galley "caboose," and the cargo hatch cover in photo #19 are to be replaced as original. This is the only coasting schooner left which carries the galley "caboose." This arrangement of having the

galley on deck in its separate house is an interesting part of the ship's evolution: The galley was placed on deck to conserve space below for cargo, that space being premium in small coasting ships. Next, the galley was detached and fastened to the deck with turnbuckles so that it could be placed on top of deck loads. As crews became smaller with the advent of mechanical winches for raising sails (the WESTERN UNION has none), the galley stove was often moved below in the great cabin, but the caboose then housed the "donkey engine" for the winches. It remained, however, a place where the person on watch forward could be out of the weather but still stand his watch on deck. When sail went out of use, and the helmsman no longer needed to be out in the open to see the sails, this became the preferred place for the wheelhouse and remains the chosen place on ships today.

Photo #20 shows the starboard, forward pinrail and the turnbuckles setting up the fore-rigging. The pinrails and the turnbuckles are the original ones with which the ship was first rigged. Also, note the bulwarks and the bulwark stanchions, which are Madiera, as are the frames throughout the ship. This type of mahogany has been noted as "one of the very best shipbuilding materials of the world." It is virtually impervious to rot in either salt or fresh water. It is extremely hard and dense (the heartwood of it does not float) and it holds fastenings superbly. This particular mahogany was grown on the builder's property in the Caymans. It is virtually non-existant today, and has not been imported to the United States for some years.

Note (photo #21) the detail of semi-fancy fastenings for the halliards, which are built in conjunction with the boom saddle around the mast.

In photo #22, a second companionway, built similarly to the one at the engine room and the great cabin, is evident . Also note the anchor cathead extending over the starboard rail. (In most schooners, there was another over the port rail.) The WESTERN UNION has none on the port side, as it would have been in the way when working cables over side.

In photo #23, the anchor windglass of the WESTERN UNION has been replaced with an exact duplicate found in a fishing village on the Delaware River. The original was in poor condition. The present one is of the same vintage, and made at the same foundry as the original. It is in excellent condition and is used regularly. Also note the bronze bow chocks cut into the bufalow rail. They were cast especially for the WESTERN UNION.

The typical American bowsprit/jibboom arrangement can be seen in photo #24.

Photo #25 shows a distinctive "knob" at the forward end of the cutwater, and the lack of trailboards, which were normally on southern schooners.

The foremast head (photo #26) is somewhat longer than usual and is set up with an extra pair of shrouds. This was presumably done to aid in carrying a "fisherman" staysail in light winds and to provide room for lifting gear in cable work.

The mainmast head (photo #27) is exactly like the typical "Chesapeake" arrangement from the ATKINS. It features swing spreaders for the main topmast stays making running backstays unnecessary.

In photo #28, note that the depths (vertical length) of the main and fore sails are relatively shallow. This was once again, a southern innovation, especially suited for the wind patterns in the islands and the Gulf of Mexico. It allows sailing in the relatively high winds without reefing, and the use of large topsails for times when the tradewinds are not in evidence.

The layout of the great cabin below is typical of the American coasting schooner throughout the period represented. There is a small separate cabin for the Captain, a head, and four bunks around the perimeter, with the center open. The view in photo #30, is forward, showing the chart table where the navigating is done. Note the use of yellow pine wainscoating on the bulkheads. The door shown went into the engine room, but is now generally secured for Coast Guard requirements. It can be opened, retaining the original secondary entrance to the engine room.

Photo #31 shows the port, aft corner of the great cabin and two of the original bunks, plus the original ladder, bench and corner shelf.

Photo #32 shows two unusual distinctive marks: the carved mahogany placard "WASHROOM" (original equipment), which is unusual because historic ships never had "washrooms", but rather, heads; and the horizontal grain in the door panels.

Photos #38 and 39 show the cargo hold forward and aft, respectively. According to law, American ships must have their net tonnage and their official number carved in the "main beam" (the longest deck beam in a ship). Here, it is in the beam directly under the forward edge of the cargo hatch combing. In photo #39, note the sawn curvature of the deck beams.

The doors and walls seen in these photos, including the upright 6" x 6" beams are for passenger accomodation. They are <u>not</u> structural and can be removed easily, leaving the original open cargo area.

Photo #40 shows two of the bunks in the cargo hold.

In the fo'csle, (photo #42) the layout is original, but all bunks and wooden fittings have been rebuilt because of previous poor condition. This ladder is original. Note the foot of the foremast extending down through the deck and the table. Photo #45 shows the foremast step and its butt.

Note in photo #43 the vent holes in the ceiling (inside planking) for ventilation of the planking and frams. Separations between bunks are open at the top to aid ventilation in the bunks because the ship was built to operate in warm southern latitudes.

Photo #46 shows the starboard side of the bosun's locker where the utensils of maintainence are kept.

THE WESTERN UNION TELEGRAPH COMPANY
INCORPORATED

REPAIR OF Punta Rassa - Key West #4 CABLE

C. S. Western Union

NAVIGATOR'S REPORT

Section Repair No. 35 Ships Operation No. 151

Port or operation Sailing from Key West Florida.

Ships Date & Time	Greenwich Civil Date & Time	REMARKS
June 26th 1939	June 26th 1939	Received orders to proceed on repair to the Punta Rassa cable faulty 906.7 ohms, 97.67 NM from Key West cable hut. Lat. 26 08 20 N Long. 82 02 30 W. Estimate # 151-0-39. Signed on crew, took on provisions, stores, etc.
June 27th AM	June 27th	Finished taking on stores, and putting ship in commission. Electrician Hopkins reported aboard from Miami Beach cable office. 4 gallons of gasoline used from ships main tank for the Delco Electric plant.
June 28th 9.00 AM	June 28th 1400	Ready for sea.
10.00 AM	1500	Cleared the FEC dock for Smiths shoals. To pick up spare cable for the repair. No type B cable left in the cable tanks. Weather clear, wind light NW. Bar 30.08.
1.55 PM	1855	On ground off Smith shoals to grapple for spare cable Will pick up the 2.140 NM type B 130/130BT 12/6 lying near the shoals for storage.
2.00 PM	1900	Grapnels down, dragging W for the sth end of cable.
2.20 PM	1920	Missed end, turn ship and drag E. Hooked cable, and underrun to end for picking up.
3.40 PM	2040	Commence picking up, using the crab winch recently
	June 29th	reed from Halifax depot.
7.25 PM	0025	Cease picking up and lay to cable for the nig t. Weather cloudy, Wind SE mod. Bar 30.07. Used 2 gallons gas for Delco, and 5 gals for winch
June 29th		
6.00 AM	1100	Weather cloudy, wind light SSE Bar. 30.05.
6.55 AM	1155	Commence picking up.
8.20 AM	1320	North end of the 2.140 NM cable aboard.
9.05 AM	1405	Left Smiths shoals for Naples. Course N mag.
XXXXXX	June 30th	
7.45 PM	0045	Anchored off Naples for the night. Weather cl udy, wind light WNW, Bar 30.07. 2 gals gas used on Delco
June 30th		
6.00 AM	1100	Weather cloudy, wind light SW. Bar 30.04.
7.55 AM	1255	Underway for cable ground. Course 273 deg mag. distance 13 NM.
10.40 AM	1540	On cable ground. Mark buoy moored in 7fm. Lat 26 08 14 N Long 82 02 30 W.
10.53 AM	1553	Grapnels down, drag W.
11.08 AM	1608	Turn ship and drag E.
11.21 AM	1621	Hooked cable.
11.25 AM	1625	Cable to surface. Type D, 15/12½.
1.15 PM	1815	Underrunning N. Cable looks to be in good condition.
1.30 PM	1830	End aboard. Total break on rock bottom. Cable end pu in set to speak Key West.
1.46 PM	1846	Unable to raise Key West. D.R. Test to Key West shor cable earthed. OR gives 936 ohms Int.
2.20 PM	1920	Still unable to raise Key west office so cabl put t see with #2 buoy, and ship goes to recover Nt end.

NAVIGATOR'S REPORT

C. S. Western Union Ship's Operation No. 151

Ships Date & Time	Greenwich Civil Date & Time	REMARKS
June 30 Contd.	June 30 Contd.	
2.48 PM	1948	Grapnels down, Drag E.
2.59 PM	1959	Hooked cable.
3.04 PM	2004	Cable to the surface. Type B 12/6 120/130BT. T i 1 .38 NM laid in 1934.
3.40 PM	2040	Underrun to Sth splice.
4.00 PM	2100	Sth splice aboard. Opened for test towards Punta Ra sa
4.10 PM	2110	Unable to raise Punta Rassa. Cable shows open t . Heavy squall bearing down from the West, so cable put to sea with #1 buoy, and ship anchored off cable li e.
4.35 PM	2135	Heavy squall from the NW with much rain.
6.00 PM	2300	Weather cloudy, wind fresh NW. Bar 30.04. 2 gals gasoline used on Delee.
July 1st	July 1st	
6.00 AM	1100	Weather cloudy wind light WSW. Bar 30.06.
6.55 AM	1155	Anchor up and underway for #2 buoy on the Key ast en
7.14 AM	1214	Sth end aboard, we try to speak Key West. Same re ult as yesterday afternoon. Another OR taken gives same result. 936 ohms int. steady.
8.30 AM	1330	Sealed sth end and put it to sea with #2 buoy. S i new goes to Nth end again.
8.58 AM	1358	Nth end aboard. We try to speak Punta Rassa. Same s sul as yesterday. DR Nth gives .016 megs. Variable.
9.35 AM	1435	Nth end put to sea with #1 buoy, and ship stands i for Naples to find out if any thing wrong with ffi e apparatus.
11.35 AM	1635	Anchored close to Naples dock. Send ships boat ash with Electrician Hopkins, and Seaman H. Steadm t send wires to Key West and Ft Myers offices.
2.35 PM	1935	Electrician Hopkins returns to the ship, and report . Key s t reports trouble apparently in arresters in the cabl hut. Ft Myers reports the cable shows steady cart t them. It is decided to return to the cable grou d, a d try another test towards Punta Rassa, and if not abl to get results, to go to Rassa and make locatio t s from there.
2.45 PM	1945	Underway for cable ground.
4.40 PM	2140	Picked up #1 buoy on Nth end. Tests showed same re ul .018 megs varying. Unable to make capacity test ac t. IC of the type D cable not given in the splice li t.
4.50 PM	2150	Cable slipped to sea with #1 buoy, and ship heads f r
7.30 PM	July 2nd 0030	Sanibel bell buoy. Course 20 mag. Distance 16½ NM. Passed bell buoy and anchored near black channel l y. 2 gallons gasoline used for Delee.
July 2nd		
6.00 AM	1100	Weather clear, wind light ESE. Bar 30.08.
6.43 AM	1143	Underway for dock at Rassa. Did not enter harbor previous night on account of the hardness of mosquit s which come aboard when under the lee of the lan .
7.47 AM	1247	Tied up at Rassa dock. Sent Electrician and apparatu to cable office for testing. Series of Kennellys place 110 ohms from Rassa office. It was not known at t e time that there were 3 or 4 other faults besides t e original one in the cable.
3.40 PM	2040	Cleared dock at Rassa, underway for the Nth fault.
4.15 PM	2115	Pass the black buoy off Sanibel, and lay course f r t cable ground. Course 197 mag. Distance 6½ NM.
5.10 PM	2210	On ground. 5½ Fms. Put XXI #4 buoy over for mark, a d proceeded to grapple for cable. Using two centiped s in tandem.
5.50 PM	2250	Bottom mud and cable buried. After making several unsuccessful drags, and not hooking cable, decid t change to mud grapnel. Heavy squall and rain beari g down from the NE so abandon work for the day, an

NAVIGATOR'S REPORT

C. S. Western Union — Ship's Operation No. 151

Ships Date & Time	Greenwich Civil Date & Time	REMARKS
July 2nd Contd.	July 2nd Contd.	stand by for squall.
6.15 PM	2315	Squall struck with very heavy rain. lasted approx. 1 hour.
7.45 PM	July 3rd 0045	Anchored for the night. Weather clear, wind light NW. Bar 30-11
		2 gallons gasoline used for Delco, 5 gallons for ships winch.
July 3rd		
6.00 AM	1100	Weather clear Wind light SE Bar 30.10.
7.10 AM	1210	Grapnel over, drag W. Using 200 lb and grapnel.
7.53 AM	1253	Hooked cable. Sounding 6½ fms.
8.05 AM	1305	Cable to surface. This is the 1.31 NM type B laid by the Field in 1927.
8.40 AM	1340	Underrun Nth. leaving #5 buoy on cable at point when grappled.
9.40 AM	1440	Have underrun approx 2 NM nth, all cable good. Put cable to sea, and stand up for #5 buoy to underrun t
10.34 AM	1534	#5 buoy and cable aboard. Underrunning Sth.
11.40 AM	1640	Have underrun Sth to the Field splice of 1927, open for test.
1.16 PM	1816	Splice opened for test. Test shows cable grounds NT approx 62 ohms.
2.10 PM	1910	Start splice.
4.00 PM	2100	SPLICE Finished. Cable put to sea.
6.00 PM	2300	Under way to grapple for cable north at new positio of fault.
		Anchored for the night. Weather cloudy wind mod Bar 30.10.
		.2 gallons gasoline used for Delco.
July 4th	July 4th	
6.00 AM	1100	Weather clear, Wind light NW Bar 30.03.
7.00 AM	1200	Lying at anchor while repairs being made to wire.
8.30 AM	1330	Preparing to grapple. Will pick up cable close t the Splice of 10/1 to 12/6. Lat. 26 23 40 N Long 81 58 58
9.48 AM	1448	Grapnel lowered drag W. Using 200lb mud grapple.
10.03 AM	1503	Hooked cable, but slipped off hook while raising.
10.11 AM	1511	Grapnel down drag E. Missed cable, turn and drag W
10.46 AM	1546	Hooked cable.
10.53 AM	1553	Cable to surface. Type A 10/1. very taut. Conditi n perfect. Heavy wind and rain squall bearing down fr m the N. We suspend work till it passes over.
1.00 PM	1800	Underrun Sth to splice of 10/1 to 12/6.
1.35 PM	1835	Splice comes aboard, continue UR Sth.
1.40 PM	1840	Bad place in armor comes over, step and place #5 bu y on it.
1.50 PM	1850	Broken end comes aboard. Speak Ft Myers, and the put cable to sea with #3 buoy.
2.44 PM	1944	Grapnel down, drag W. 2 centipedes in tandem.
3.00 PM	2000	Hook cable, and on raising find it to be an old piec of abandoned cable. Grapnels lowered again and ru
3.31 PM	2031	Hooked cable
4.15 PM	2115	Cable aboard, and underrun Nth.
4.40 PM	2140	Splice of .80 NM 12/6 to 3.86 NM 12/6 aboard. Marry cable from hold to this splice, and lay out to #5 buoy on the Nth end. #8 buoy left on the married end.
5.45 PM	2245	Paying out towards #5 buoy.
6.15 PM	2315	At Nth end, #5 buoy, and Nth end aboard. #5 buoy ha been left on the bad spot in the armor to the Nth of buoy #3. Cable laid married to Nth end and put t sea with #5 buoy.
	July 5th	
7.15 PM	0015	Anchored for night. Weather cloudy wind light NW Bar 30.00. 8 gallons gasoline used on Delco.

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C. S. Western Union — Ship's Operation No. 181

Ships Date & Time	Greenwich Civil Date & Time	REMARKS
July 5th	July 5th	
6.00 AM	1100	Weather cloudy wind light SW Raining. Bar 29.95.
7.50 AM	1250	Pick up #5 buoy on Nth married ends. Prepare to mak Nth splice.
9.07 AM	1407	Speak Ft Myers and get DR of .17 megs. It is raining at Ft Myers and this DR is over 20 miles of landline s.
9.13 AM	1413	Start Nth splice.
10.30 AM	1530	Joint finished. Raining heavily.
11.35 AM	1635	Splice finished. Underrun to married ends at SF.
11.58 AM	1658	Married ends and #8 buoy aboard. Open ends for test and splice.
1.24 PM	1824	Speak Ft Myers, and get DR. of .45 megs. This not satisfactory, so request that man be sent to Rasco cable office to open cable for test. Atlanta office advised of progress.
2.17 PM	1917	Rasco cable office in, and he frees and earths for t st DR ship to Rasco office 17 megs. CR 70.59 ohms. Rasco released and prepare to make final splice thi position.
4.15 PM	2115	Splice finished. and cable slipped to sea.
4.55 PM	2155	Pick up #3 buoy, and underway for the original break south.
	July 6th	
7.15 PM	0015	Anchored near orkk buoy at first break. Weather cloudy, wind light S. Bar. 29.96. 2 gallons gasoline used for Delco plant.
July 6th		
6.00 AM	1100	Weather cloudy wind fresh NW. Bar 29.95.
7.05 AM	1205	#2 buoy on the Sth end aboard, picking up to good ca le. The type D cable here is on rock bottom and in poor condition. Picked up to the Nth end of the .42 MM type S 12/8 laid in by the Atkins Sept 1931. This cable i good condition. This end put to sea with #7 buoy.
9.05 AM	1405	Weather is threatening, and strong wind and rain squ lls Dumped all bad cable picked up off cable line.
9.30 AM	1430	Pick up #1 buoy on the Nth end and call Ft Myers. U able to raise them. Test taken shows cable open north of the ship.
10.00 AM	1500	Wind has changed to strong South, with heavy sea an rain. Work suspended waiting for change of weather. Went to Sth and picked up cable to speak Key West.
2.36 PM	1936	DR taken to Key West office 1.3 megs. Atlanta advised of conditions. Cable put to sea wit #7 buoy. Ship anchored to wait better weather.
6.30 PM	2330	Weather clear, Wind fresh S heavy sea. Bar 29.96. 2 gallons gasoline used for Delco plant.
July 7th	July 7th	
6.00 AM	1100	Weather raining heavy, Wind fresh SSE. heavy sea. bar. 29.91
7.00 AM	1200	Wind and sea increasing. Ship straining at anchor.
12.45 PM	1745	Wind strong SSE. Heavy sea.
1.00 PM	1800	Anchor up and stand in for the land under sail, for better anchorage.
4.05 PM	2105	Anchored in 4½ Fms off Naples. Raining.
7.00 PM	2400	Weather cloudy wind Fresh SE bar 29.94. 2 gallons gasoline used for Delco plant.
July 8th	July 8th	
5.45 AM	1045	Weather cloudy wind SSE mod. Considerable sea. Bar 2 .96 Underway for cable ground. Undersail only.
6.00 AM	1100	Radio receiving set went out of order. No more weath r reports.
11.00 AM	1600	Wind and sea have abated somewhat. Now prepare to grappl to the north of #1 buoy which is on the STH end of t e .38 Type B cable. Will then underrun Nth towards sp S.
12.44 PM	1744	Grapnels down, drag W. Two centipedes in tandem.
12.49 PM	1749	Hook cable.
1.15 PM	1815	Cable aboard. Underrunning Nth.

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C. S. Western Union — Ship's Operation No. 151

Ships Date & Time	Greenwich Civil Date & Time	REMARKS
July 8th Contd	July 8th Contd.	
1.30 PM	1830	Splice passed over Type B sth to Type D Nth.
1.50 PM	1850	Cable parted on deck. South end lost. Pick up Nth t good cable, and try Ft Myers. Cable still shows ope Sth, but now with MR of 1.4 megs. Put the NTH end to sea with #2 buoy and go to grapple for the Sth end.
2.54 PM	1954	Grapnels down, drag W.
2.58 PM	1958	Hook cable.
3.15 PM	2015	Cable aboard, and pick up south to good cable where cable lying on sand.
3.45 PM	2045	Cable put to sea with #3 buoy, and stand sth to lay in cable at first break.
4.20 PM	2120	Pick up #7 buoy on sth end of first break.
4.43 PM	2143	Get Key West and take DR 1.5 megs.
4.55 PM	2155	Marry cable from tank to Sth end and prepare to pay out north to #5 buoy.
5.40 PM	2240	Start paying out.
6.20 PM	2320	Finished paying out. .36 NM type B cable here. #5 buoy aboard, Married ends, and cable put to sea with #5 buoy.
	July 9th.	
7.08 PM	0008	Anchored for night. Weather clear, wind light S Bar. 29.98. 5 gallons gasoline used for winch.
July 9th		
6.00 AM	1100	Weather cloudy, wind mod SSE. Bar 29.96. Putting paton on ships work boat.
7.17 AM	1217	Picked up #6 buoy on Nth married ends to make nth splice. Raining. Put up awnings.
9.10 AM	1410	Start splice. Heavy SW squall and rain.
10.43 AM	1543	Splice finished, and cable slipped to sea. More squalls and rain. Stand by.
2.00 PM	1900	Picked up #6 buoy on the Sf married ends. Open cabl ends and prepare for splice.
2.23 PM	1923	Speak Key West. Tests to Key West are. DR 1.8 megs CR 942 CBS HAU Test to sealed end nth show inf.
2.45 PM	1945	Start splice.
4.30 PM	2130	Splice finished and cable slipped to sea. Proceed t move mark buoy to new position north.
5.40 PM	2240	Mark buoy and moorings aboard. proceed north to new position.
6.23 PM	2323	Mark buoy moored new position. Now proceed south to pick up approx 1/4 NM type B cable which was cut out of the .38 NM type B on July 28th and left on buoy 1 The best of this cable can be used to repair cable at position where it parted at 1.50 PM July 8th.
6.35 PM	2335	Picked up #1 buoy and cable.
	July 10th	
7.18 PM	0018	Finished picking up cable. Approx .25 NM
7.30 PM	0030	Anchored for the night. Weather clear, wind mod. E Bar 30.00 2 gallons gasoline used on Delco plant.
July 10th		
6.00 AM	1100	Weather cloudy, wind light SSE. Bar 30.00
7.10 AM	1210	Pick up #3 buoy on the sth end of break, and marry n the end of the recovered cable. Type B - 12/6 130/130 BT.
7.52 AM	1252	Start paying out to #2 buoy on the nth end.
8.06 AM	1306	Nth end and #2 buoy aboard. Test taken to the north still shows cable open to ship, with MR of 1.6 megs. Marry cable ends together, and proceed to underrun cable nth.
10.45 AM	1545	Underrunning Nth. now in rotten cable Type D 15/12½. Most of cable underrun since starting nth has been good. Cable parted over stern. Commenced picking up Nth and cable parted over bow. Prepare to grapple f r Nth end.

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Ships Date & Time	Greenwich Civil Date & Time	REMARKS
July 10th Contd	July 10th Contd.	
1.45 PM	1845	Grapnels down, drag E & centipedes in tandem. mi se
1.55 PM	1855	Turn ship and drag W. Missed cable.
2.08 PM	1908	Turn and drag E.
2.14 PM	1914	Hook cable.
2.19 PM	1919	Cable to the surface. Type B 10/6 laid by the Atkin in Sept 1937. 1.14 NM. As we are close to her SF splice will underrun sth to it.
3.45 PM	1945	Atkins SF splice aboard. We cut. Test towards Ft y i shows heavy earth.
3.49 PM	2049	Unable to raise Ft Myers. Cable put to sea with #2 buoy. Proceed to grapple for the Sth end.
4.05 PM	2105	Grapnels down drag E.
4.14 PM	2114	Hook cable.
4.20 PM	2120	Cable at surface. We cut and proceed to pick up sout
4.45 PM	2145	Have picked up to good cable. Cut and buoy using #4 buoy. On account of the direction of the wind an current, will lay in from the North to South. Proce to #2 buoy on the Nerth end.
5.45 PM	2245	#2 buoy and Nth end aboard. Marrying the cable fr n hold to the Nth end. Leave #2 buoy here.
6.20 PM	2320	Paying out south to #4 buoy on the Sth. end.
	July 11th	
7.15 PM	0015	#4 buoy and cable aboard. Marry ends and put to s s with #5 buoy.
7.37 PM	0037	Underway south to the insertion made this AM. Will make these splices, and return north for finals
8.11 PM	0111	At Mark buoy. Anchored for the night. Weather clou y, Wind fresh SSW. Bar 30.07. 8 gallons gasoline for l l
July 11th		
6.00 AM	1100	Weather clear, wind Light SE. Bar 30.06.
6.57 AM	1157	Underway for #7 buoy on Married ends.
7.33 AM	1233	#7 buoy and cable aboard, getting ready for splice.
8.00 AM	1300	Speak Key West and test. DR ship to Key West 1.6 me s. CR 956 ohms.
8.25 AM	1325	Start splice.
9.40 AM	1444	Splice finished. Underrun to Nth married ends .13 N away, to make splice. Step on way to serve several places on the armor of recovered cable laid in.
10.53 AM	1553	Nth married ends aboard. Open for splicing.
11.23 AM	1623	Speak Key West take DR. 1.6 megs.
12.10 PM	1710	Start Splice.
1.29 PM	1829	Splice finished and cable slipped to sea. Now stand on north for #5 buoy on the south ends of cable laid i 7.15 PM July 12th.
2.13 PM	1913	#5 Buoy and cable aboard. Opening ends for splice.
2.56 PM	1956	Speak Key West. DR to Key West 1.4 megs. CR to " " CR 965.4 ohms.
3.24 PM	2024	Start Splice.
4.40 PM	2140	Splice finished. Cable slipped to sea. Head for #2 bu on the Nth married ends.
5.11 PM	2311	#2 Buoy and cable aboard. Opening ends for splice.
6.30 PM	2330	Unable to raise Ft Myers. cable shows heavy earth.
6.40 PM	2540	Speak Key West and ask him to get Bicore released f p Varley test.
7.00 PM	2400	Key West advises Bicore released, and cables 4 and looped at Ft Myers and Key West for Varley test. Loop is for 30 minutes. Electrician advises unabl t get test. Cables are either not looped or there i something wrong at one of the offices. Will have t wait until 7.30 to contact Key West.
	July 12th	
	0030	
7.30 PM	[illegible]	Key West in. We report to him no loop. He says that Russa cables are in the block at back of the switc board wrong, and asks if loop through front of th board will do. We tell him yes.

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Ships Date & Time	Greenwich Civil Date & Time	REMARKS
July 11th	July 12th	We try for loop again several times without succes . Send message to Ft Myers via Key West and request that man be sent to Rasea office to loop cables there, as we suppose that there is trouble on the 25 miles of landlines between Rasea & Myers.
8.21 PM	0121	Man now at Rasea office. Reports that cables are looped there. Loop is for 15 minutes. Test still no good. Unable to get loop. Test set is gone over and found to be in perfect shape.
8.47 PM	0147	Get Key West and advise that conditions are the same and that we are getting no loop. He tries loop at back of the board, and then at the front of the board to see if he can give us loop.
8.57 PM	0157	Get loop OK. Proceeded with Varley measurement. Varley places fault 52 ohms north of the ship. Advise Key West that Rasea is released, and also release man at Rasea office. Take MR to Key West. 1.4 megs.
9.25 PM	0229	Start Splice.
10.56 PM	0356	Splice finished, Ship is pulled ahead clear of the splice, before slipping as it is intended to underrun north next day to the fault 52 ohms distant.
11.25 PM	0425	Cable slipped to sea with #2 buoy.
11.40 PM	0440	Anchored for the night. Weather clear sea calm. Bar. 30.10 8 gallons gasoline taken from tanks for Delco plant.
July 12th		
6.00 AM	1100	Weather cloudy, wind light variable, Bar. 30.04
7.12 AM	1212	Pick up #2 buoy and cable.
7.25 AM	1225	Underrunning Eth.
11.20 AM	1620	Splice aboard. 1.31 MM -B to .21 MM -B. This is close to measurement. Will open for test. Splice opened, and fault found under the butt. Deteriorated Gutta Percha.
11.47 AM	1647	Speak Key West and test. Get MR of 1.4 megs.
11.59 AM	1659	Speak Ft. Myers. as it is raining at Ft Myers and this is the Final splice, request that man be sent to Rasea to open cable for MR test.
1.57 PM	1857	Get Rasea cable office, and they open for our Test. MR ship to Rasea 16 megs. CR 106.3 ohms. Release men at Rasea and prepare for splicing. Atlanta office advised now making final splice and that ship will go into Punta Rasea for some provisions and fuel. MM MM At this splice of .21 -B - 12/6 north, to 1.31 - B- 10/6 south, the 1.31 MM - 10/6 is listed on the splice li t as being 130/130 BT. This is an error. The cable is 120/140BT.
3.15 PM	2015	Start Splice.
4.55 PM	2155	Splice finished and cable slipped to sea.
5.14 PM	2214	Underway for Punta Rasea.
7.00 PM	2400	Anchored in the stream opposite dock at Punta Rasea. Weather raining, wind light NE, Bar 30.05. 2 gallons gasoline used for Delco plant,
July 13th	July 13th.	
6.00 AM	1103	Weather clear, wind light variable, Bar 30.00 Moved to the dock to take on provisions and fuel.
9.05 AM		Provisions and fuel aboard, clear for cable grounds to pick up Mark buoy.