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National Ocean Survey, Office of Fleet Operations.

Ships of the NOAA Fleet

September 1977

OFFICE OF FLEET OPERATIONS
SEP 1977
U.S. DEPARTMENT OF COMMERCE

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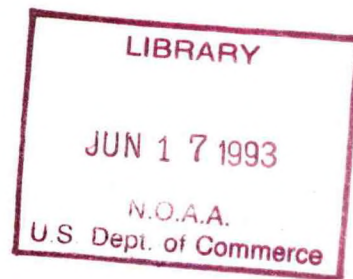
Introduction

The ships of the NOAA Fleet are the vessels which serve the needs of the Department of Commerce and the Nation. They are found operating off both Atlantic and Pacific Coasts, in the Gulfs of Mexico and Alaska, and in the Great Lakes. They suffer through the bitter Aleutian and Bering Sea winters and bask in the warmth of the tropical sun of Hawaii and the Carribean Islands.

The operational duties assigned to the ships range from service with the National Ocean Survey's nautical charting program to the scientific endeavors of the National Marine Fisheries Service or the research activities of the Environmental Research Laboratories. The particular tasks may be as well defined as a tide and current survey in a brackish estuary or may be an extensive international oceanographic study spanning an entire ocean. Thus, the variety of configurations, characteristics and equipment of the vessels found in this publication reflects the versatility of the ships of the NOAA Fleet.

Centralized management of the NOAA Fleet is the responsibility of the Office of Fleet Operations, an integral part of the National Ocean Survey. Operational support for the fleet is provided through the Atlantic Marine Center in Norfolk, Virginia, the Pacific Marine Center in Seattle, Washington, and their several satellite support facilities.

Ships of the NOAA Fleet are identified by color scheme, letter-number designator, and by the display of the NOAA logo on the superstructure. Hull and superstructure are painted white; masts and stacks, buff; and boot top and trim, black. Letter number designators appear on both sides of the bow above the letters, "NOAA". The designator is a three-digit number preceded by the identification letter, "R" for research vessels or "S" for survey vessels. The first number of the three-digit identification of the class grouping for NOAA vessels is computed from a combination of the vessel's gross tonnage and its main propulsion plant's rated horsepower. The remaining digits are the vessel's hull number.

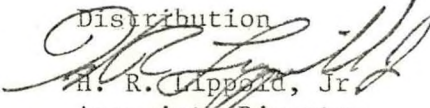




UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C7x4/333

DEC 9 1977

TO: Distribution
FROM:  H. R. Lippard, Jr.
Associate Director
Office of Fleet Operations

SUBJECT: Publication "Ships of the NOAA Fleet"

This preliminary copy of the updated edition of "Ships of the NOAA Fleet" is expected to cover both format and content for the future. A more finalized and higher quality edition is expected to be out in the near future. We regret the lack of quality in the printing and photographic reproduction of this edition, but it should serve the intended purpose. As would be expected, changes have taken place since the initial compiling of data and final printing of this edition. It is, therefore, being requested of the ship commands, support facilities, and marine centers that changes and errors in the listings and completion of the listings for individual vessels be submitted to the Office of Fleet Operations (C7x4). Recent pictures of each vessel showing hull designators are also requested if not already submitted. We hope to keep this publication current and complete in the future by periodic updating.

Due to the fact that this is a preliminary printing, only a limited number of copies have been produced. We, therefore, will not be able to satisfy all requests for additional copies of this publication, but will be able to fulfill your needs in the aforementioned final edition.



SHIPS OF THE NOAA FLEET

<u>Vessel</u>	<u>Class</u>	<u>Length</u>	<u>Designator</u>
OCEANOGRAPHER	I	303'	R101
DISCOVERER	I	303'	R102
RESEARCHER	I	278'	R103
SURVEYOR	I	292'	S132
FAIRWEATHER	II	231'	S220
RAINIER	II	231'	S221
MT. MITCHELL	II	231'	S222
MILLER FREEMAN	II	215'	R223
PEIRCE	III	163'	S328
WHITING	III	163'	S329
McARTHUR	III	175'	S330
DAVIDSON	III	175'	S331
OREGON II	III	170'	R332
GEORGE B. KELEZ	IV	177'	R441
ALBATROSS IV	IV	187'	R442
TOWNSEND CROMWELL	IV	164'	R443
DAVID STARR JORDAN	IV	171'	R444
DELAWARE II	IV	156'	R445
FERREL	IV	133'	S492
RUDE	V	90'	S590
HECK	V	90'	S591
OREGON	V	100'	R551
JOHN N. COBB	V	94'	R552
MURRE II	VI	86'	R663

The loose-leaf presentation of NOAA's Fleet of ships will be revised as necessary to maintain an accurate description of each ship in an operational status.

Information on changes or omissions should be addressed to:

Office of Fleet Operations, NOS, C7
NOAA, U.S. Department of Commerce
Rockville, Maryland 20852

August 1977



OCEANOGRAPHER R101

LAUNCHED: April 18, 1964
 DELIVERED: April 20, 1966
 COMMISSIONED: July 13, 1966

DESIGNER: Maritime Administration
 BUILDER: Aerojet-General Shipyards
 Jacksonville, Florida

CALL LETTERS: WTEP

SISTER SHIPS: DISCOVERER

HOME PORT: Seattle, Washington

GROSS TONNAGE: 3,701
 NET TONNAGE: 1,095
 DISPLACEMENT: 3,959 tons
 HULL: Welded Steel with
 ice strengthening in bow
 LENGTH (LOA): 303'0" (92.40 meters)
 BREADTH (Moulded): 52'5" (16.00 meters)
 DRAFT, MAXIMUM: 20'6" (6.28 meters)
 DRAFT, MEAN: 18'0" (5.49 meters)

CRUISING SPEED: 15 knots
 RANGE: 15,200 nautical miles
 SHAFT HORSEPOWER: 5,000
 FUEL: #2 Diesel
 FUEL CAPACITY: 320,531 gallons
 FUEL CONSUMPTION: 312 gallons/hour
 (at cruising speed)
 ENDURANCE: 40 days
 CONSTRAINT: Fuel

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

Oceanographic surveys.

Dry Oceanographic Lab	3,200 sq.ft.
Wet Oceanographic Lab	156 sq.ft.
Meteorological Lab	160 sq.ft.
Gravity Room	176 sq.ft.
Photographic Lab	165 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 14
 SHIP'S OFFICERS & CREW: 63
 SCIENTISTS: 30

BERTHING

ONE-BUNK STATEROOMS: 21
 TWO-BUNK STATEROOMS: 47
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 115

MESSING

CABIN MESS: 6 persons/seating
 WARDROOM MESS: 27 persons/seating
 SHIP'S OFFICERS' MESS: 14 persons/seating
 TECHNICIANS'S MESS: 16 persons/seating
 CREW MESS: 50 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 4
 MEDICINE CHEST: Complete inventory
 including controlled drugs.

ADMINISTRATOR: Chief Pharmacist Mate

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCHES

Quantity: 2
Manufacturer: Tacoma Boat Building
Drive: Electric
Line Pull Rate:
Max. Pull Rate: 120 m./min.
Drum Capy - Min.: 10,000 ft., 3/8"-3/16" dia. wire
- Max.: (interchangeable drum)

DEEP SEA WINCHES

Quantity:	1	1
Manufacturer:	Western Gear Corp.	Morgon Company
Drive:	Hydraulic	Electro-hydraulic
Line Pull Rate:	15,000 ft.-lbs.	5,000 ft.-lbs.
Max. Pull Rate:	85 m./min.	180 ft./sec.
Drum Capy: - Min.:	42,000 ft., 1/2" dia. wire	6,000 m., 7/16" dia. wire
- Max.:		

CRANES AND BOOMS

STORES CRANE

Quantity: 1
Manufacturer: Skagit Corp.
Type: Telescoping Boom
Rotation: 360°
Radius - Max.: 40 ft.
- Min.: 28 ft.
Hoisting Capy -
Min. Radius: 7,300 lbs.
Max. Radius: 4,700 lbs.

OCEANOGRAPHIC CRANE

1
Lake Shore, Inc.
Non-telescoping Boom
360°
35 ft.

10,000 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

Quantity: 1
Type: Movable
Clearance: 9 ft. (over the side)
General Location: E Deck, Stern

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Stockless
Weight/Length: 4,850 lbs. (each)
Chain Size:
Weight/Shot:

ANCHOR CHAINS

2
Forged Steel, Stud Link
135 fathoms (each)
1-11/16"
2,530 lbs.

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Capstan Windlass (vertical-shaft type)
Manufacturer: Skagit Corp.
Drive: Electro/Hydraulic

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	(2) RFC (1) CAI	1 KW 150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2W
RADIO AUTO ALARM RECEIVER	1	RCA	
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]		- is equipped with EPIRBs.	

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATHAV	2	Magnavox	
LORAN-A/C	2	Benmar	
LORAN-C	2	Internav	
OMEGA	1	Navidyne	
RDF	1	RCA	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER	2	Raytheon	12 KHZ
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	1	DEC	PDP 11/20
HYDROPLOT CONTROLLER			
COMLOT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Diesel Electric

MAIN ENGINES

Quantity: 4
Type: Diesel, opposed piston
Manufacturer: Fairbanks Morse
Output: - Normal:
 Max.:

MAIN GENERATORS

4
Westinghouse Electric
1,000 KW
1,150 KW

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPULSION MOTORS

Quantity: 2
Type:
Manufacturer: Westinghouse
No. of Blades:
Diameter:

PROPELLERS

2
Fixed Pitch
4
12 ft.

BOW THRUSTER

Type: Through hull
Drive Train: Murray & Tregurtha, Inc.
Drive: Diesel Electric
Propulsion Motor: Westinghouse Electric
Motor Rating: 400 horsepower

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type: Low Pressure Flash
Manufacturer: Aqua Chem, Inc.
Max. Production: 8,000 gallons/day
Normal Production: 6,500 gallons/day
Normal Consumption: 5,000 gallons/day
Storage Capacity: 26,800 gallons

POLLUTION CONTROL

Type of Treatment:

Sewage Holding Tank Capacity: 6,000 gallons (2 days)

Oily Waste Holding Tank Capacity: 2,000 gallons

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	3	Fairbanks Morse/ Westinghouse	400 KW, 500 KVA	450 V	120 VAC Three Phase 220 VAC Three Phase 440 VAC Three Phase 120 VAC Single Phase
EMERGENCY GENERATOR	1	Fairbanks Morse/ General Electric	100 KW, 125 KVA	450 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	3	(2) 26'	Fiberglass	U.S. Navy	Diesel
		(1) 16'	Fiberglass	Boston Whaler	Gasoline Outboard

DISCOVERER R102

LAUNCHED: October 29, 1964
DELIVERED: December 15, 1966
COMMISSIONED: April 29, 1967

DESIGNER: Maritime Administration
BUILDER: Aerojet-General Shipyards
Jacksonville, Florida

CALL LETTERS: WTEA

SISTER SHIPS: OCEANOGRAPHER

HOME PORT: Seattle, Washington



GROSS TONNAGE: 3,701
NET TONNAGE: 1,095
DISPLACEMENT: 3,959 tons
HULL: Welded Steel, bow strengthened for ice
LENGTH (LOA): 303.0 feet (92.4 meters)
BREADTH (Moulded): 52.5 feet (16.0 meters)
DRAFT, MAXIMUM: 20.6 feet (6.28 meters)
DRAFT, MEAN: 18.0 feet (5.49 meters)

CRUISING SPEED: 15 knots
RANGE: 13,000 nautical miles
SHAFT HORSEPOWER: 5,000
FUEL: #2 Diesel
FUEL CAPACITY: 297,000 gal.
FUEL CONSUMPTION: 312 gal./hr.

ENDURANCE: 40 days
MAX. CONSTRAINT: Fuel

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Oceanographic surveys.
Dry Oceanographic Lab 3,400 sq.ft.
Wet Oceanographic Lab 125 sq.ft.
Meteorological Lab 160 sq.ft.
Gravity Lab 150 sq.ft.
Photographic Lab 165 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 14
SHIP'S OFFICERS & CREW: 67
SCIENTISTS: 24

BERTHING

ONE-BUNK STATEROOMS: 24
TWO-BUNK STATEROOMS: 46
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS: 1 (sick bay)
FIVE-BUNK STATEROOMS:
TOTAL BUNKS: 120

MESSING

CABIN MESS 6 pers./seating
WARDROOM MESS: 36 pers./seating
SHIP'S OFFICERS' MESS: 14 pers./seating
TECHNICIANS'S MESS: 16 pers./seating
CREW MESS: 20 pers./seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 4
MEDICINE CHEST: Complete inventory including controlled drugs

ADMINISTRATOR: Chief Pharmacist
Mate

DECK MACHINERY

WINCHES

	OCEANOGRAPHIC WINCH	DEEP SEA WINCH
Quantity:	2	1
Manufacturer:	Jered	Western Gear
Drive:	Electro-Hydraulic	Electro-Hydraulic
Line Pull Rate:	4,800 ft.-lbs.	30,000 ft.-lbs.
Max. Pull Rate:	30 meters/min.	133 ft./min.
Drum Capy:	30,000 ft., 3/16" dia. wire	45,000 ft., 3/4"-3/8" dia. wire (interchangeable drum)
	DREDGE AND TRAWL	C/STD WINCH
Quantity:	1	1
Manufacturer:	Tacoma Boat Co.	Marco
Drive:	Electro-Hydraulic	Electro-Hydraulic
Line Pull Rate:	6,000 ft.-lbs.	3,000 lbs.
Max. Pull Rate:	350 ft./sec.	330 ft./min.
Drum Capy:	6,000 ft., 3/16" dia. wire	6,000 meters of .292 conductor cable

CRANES AND BOOMS

	FORWARD CRANE	AFT CRANE
Quantity:	1	1
Manufacturer:	Skagit Corp	Lake Shore, Inc.
Type:	Telescoping Boom	Non-Telescoping Boom
Rotation:	360°	360°
Radius - Max.:	28.0 ft.	9.8 ft.
- Min.:	40.0 ft.	35.0.ft.
Hoisting Capy:	4,700 lbs.	Max. Radius: 10,000 lbs. Min. Radius: 20,000 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy:

A-FRAMES

OCEANOGRAPHIC:	STERN	AFTER DECK STARBOARD SIDE	MID-SHIP PORT SIDE
Quantity:	1	1	1
Type:	Movable	Movable	Movable
Clearance:	8 ft.	6 ft.	6 ft.
Capacity:	15,000 lbs.	10,000 lbs.	10,000 lbs.

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	2	2
Type:	Stockless	Di-Lok
Weight/Length:	4,800 lbs. (each)	135 fathoms (each)
Chain Size:		1-11/16"
Weight/Shot:		2,530 lbs.

	DEEP SEA ANCHOR	DEEP SEA CABLE
Quantity:		
Type:		
Weight:		
Length:		
Size:		

ANCHOR WINDLASS

Quantity: 1
Type: Capstan Windlass (vertical shaft-type)
Manufacturer: Skagit Corp.
Drive: Electric motor driven through a variable speed, reversible hydraulic transmission

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	3	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	2 Collins 1 CAI	1 KW 150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS:			
PORTABLE TRANSCEIVER	1	RCA	2 W
RADIO AUTO ALARM RECEIVER	1	RCA	
VHF EMERGENCY CAPABILITY -- vessel is equipped. [Emergency Position Indicating Radiobeacon (EPIRB)]			

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV	2	JMR	
LORAN-A			
LORAN-C	2	Internav	
OMEGA			
RDF	1	RCA	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER	2	Raytheon	12 KHZ
NARROW BEAM ECHO SOUNDER	1	General Instruments	12 KHZ
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	1	DEC	PDP 11/20
HYDROPLOT CONTROLLER	No		
COMPUTER INCREMENTAL PLOTTER	No		

ENGINEERING

MAIN PROPULSION

Type: Diesel/Electric Drive

MAIN ENGINES

Quantity: 4
Type: Diesel
Manufacturer: Fairbanks Morse

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPULSION:	GENERATORS	MOTORS	PROPELLERS
Quantity:	4	2	2
Type:			Fixed Pitch
Manufacturer:	Westinghouse	Westinghouse	
No. of Blades:			4
Diameter:			12 ft.

BOW THRUSTER

Type: Thru Hull
Drive: Electric (main propulsion generator)
Manufacturer: Westinghouse (propulsion motor)
Rating: 400 horsepower
Drive Train: Murray and Tregurtha (right angle)

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type: Low Pressure Flash
Manufacturer: Aqua Chem
Max. Production: 8,000 gallons/day
Normal Production: 7,000 gallons/day
Normal Consumption: 5,000 gallons/day
Storage Capacity: 21,230 gallons

POLLUTION CONTROL

Type of Treatment:
Sewage Holding Tank Capacity: 6,000 gallons (2 days)
Oily Waste Holding Treatment: Oily Water Separator
Oily Waste Holding Capacity: 2,000 gallons

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	3	Fairbanks	500 KVa	450V	220 VAC Single Phase 220 VAC Three Phase 440 VAC Three Phase
EMERGENCY GENERATOR	1	Fairbanks Morse/GE	100 KW	450V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					
Motor Whale Boats	1	26'	Fiberglass	U.S. Navy	Diesel
	1	17'	Aluminum	Monark	Gasoline Outboard
	1	16'	Fiberglass	Boston Whaler	Gasoline Outboard

RESEARCHER R103

LAUNCHED: October 5, 1968
DELIVERED: June 18, 1970
COMMISSIONED: October 8, 1970

DESIGNER: Maritime Administration
BUILDER: American Shipbuilding
Toledo, Ohio

CALL LETTERS: WTER

SISTER SHIPS:

HOME PORT: Miami, Florida



GROSS TONNAGE: 2,802
NET TONNAGE: 946
DISPLACEMENT: 2,772 tons
HULL: Welded Steel w/ice
strengthening in way of bow
LENGTH (LOA): 278.3 (84.8 m.)
BREADTH (Moulded): 51.0 (15.5 m.)
DRAFT, MAXIMUM: 17'1" (5.2 m.)
DRAFT, MEAN: 17'1" (5.2 m.)
CRUISING SPEED: 12.5 knots
RANGE: 8,400 nautical miles
SHAFT HORSEPOWER: 3,200
FUEL: #2 Diesel
FUEL CAPACITY: 175,567 gallons
FUEL CONSUMPTION: 175 gal./hr.
(at cruising speed)
ENDURANCE:
MAX. CONSTRAINT: 30 days

FLIGHT DECK: Yes; portable.

SCIENTIFIC CAPABILITY

General oceanographic research

Dry Oceanographic Lab 1,598 sq.ft.
Wet Oceanographic Lab 140 sq.ft.
Meteorological Lab 179 sq.ft.
Photographic Lab 150 sq.ft.
Gravity Meter Room 174 sq.ft.
Data Acquisition System 668 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 14
SHIP'S OFFICERS & CREW: 55
SCIENTISTS: 17

BERTHING

ONE-BUNK STATEROOMS: 10
TWO-BUNK STATEROOMS: 36
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS: 1
FIVE-BUNK STATEROOMS:
TOTAL BUNKS: 86

MESSING

WARDROOM MESS: 24 persons/seating
SHIP'S OFFICERS' MESS: 10 persons/seating
TECHNICIANS'S MESS: 14 persons/seating
CREW MESS: 16 persons/seating
CABIN MESS: 4 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 4
MEDICINE CHEST: Complete inventory
including controlled drugs
ADMINISTRATOR: Chief Pharmacist
Mate

DECK MACHINERY

WINCHES

	OCEANOGRAPHIC WINCH	DEEP SEA ANCHOR & CORING WINCH
Quantity:	2	1
Manufacturer:	No. Line Machine & Eng'r'g. Co.	Western Gear Corp.
Drive:	Electro-Hydraulic	Electro-Hydraulic
Line Pull Rate:	10,000 lbs. static	8,000 lbs. - 460 ft./min.
Max. Pull Rate:	400 ft./min. (3,000 lbs.)	30,000 lbs. - 133 ft./min.
Drum Capy - Min.:	12,000 ft., .292" dia. wire	45,000 ft., 9/16" dia. wire
- Max.:	30,000 ft., 3/16" dia. wire (interchangeable drum)	45,000 ft., 9/16" dia. wire
	BATHYTHERMOGRAPH MBT WINCHES	GEK & MAGNETOMETER WINCHES
Quantity:	2	2
Manufacturer:	American Chain & Cable Co.	Industrial Electric Reels
Drive:	Electric	Electric
Line Pull Rate:		300 lbs.
Max. Pull Rate:	60 ft./sec.	188 ft./min.
Drum Capy	3,000 ft., 3/32" dia. wire	750 ft., 0.7 dia. wire (interchangeable drum)

CRANES AND BOOMS

	STORES CRANES	AUXILIARY CRANE
Quantity:	4	1
Manufacturer:	Grove Manufacturing Co.	Grove Manufacturing Co.
Type:	Telescoping Boom	Telescoping Boom
Rotation:	360°	360°
Radius - Max.:	34 ft.	40 ft.
- Min.:	19 ft.	10 ft.
Hoisting Capy:	5,500 lbs. @ 28 ft.	Min.: 10,000 lbs. Max.: 1,800 lbs.
Quantity:		
Manufacturer:		
Type:		
Rotation:		
Radius - Max.:		
- Min.:		
Hoisting Capy:		

A-FRAMES

	OCEANOGRAPHIC WINCH A-FRAME	STERN A-FRAMES
Quantity:	2	1
Type:	Movable	Movable
Clearance:	5 ft. (over the side)	12 ft. (over the side)
General Location:		

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	2	2
Type:	Stockless	Cast Steel
Weight/Length:	4,223 lbs. (each)	120 fathoms (each)
Chain Size:		1-9/16 in.
Weight/Shot:		2,195 lbs.
	DEEP SEA ANCHOR	DEEP SEA CABLE
Quantity:	1	1
Type:	Danforth	
Weight:	250 lbs.	
Length:		45,000 ft.
Size:		9/16 in. dia. wire
	ANCHOR WINDLASS	
Quantity:	1	
Type:	Capstan Windlass (vertical shaft type)	
Manufacturer:	Marine Engine Specialities Corp.	
Drive:	Electric motor driven through a variable speed, reversible hydraulic transmission	

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	Collins Sunair	100 W 1 KW
RADIO TELETYPE CAPABILITY			(1) 500 W
MF SAR TRANSCEIVERS	2		(1) 40 W
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	--	is equipped.	
RADIO AUTO ALARM RECEIVER	--	is equipped.	
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	--	is equipped.	

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	3	Decca	
SATNAV	1	ITT	
LORAN-A			
LORAN-C	4	InterNav	Model #101
OMEGA			
RDF	3	(2) Bendix (1) RCA	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry/Anschutz	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	3	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER	2	Raytheon/Edo	12 KHZ 3.5 KHZ
NARROW BEAM ECHO SOUNDER	1	Edo	3.5 KHZ
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	2	Honeywell	Model #4316
CALCOMP X-Y PLOTTER			
HAZELTINE CRT KEYBOARD AND DISPLAY			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Alco
Ratio

REDUCTION GEAR

2
Single Reduction Marine
Western Gear Corp.
6.5:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLER

Quantity: 2
Type: Controllable Pitch
Manufacturer: Byrd-Johnson (KaMeWa)
No. of Blades: 3
Diameter: 10'6"

BOW THRUSTER

Type: Retractable
Drive: Diesel Electric
Manufacturer: Detroit Diesel/Delco
Rating: 450 horsepower
Drive Train: Pleuger Unterwasserpumpen GMBH

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type: 2 Effect, thin film
Manufacturer: General Electric
Max. Production: 8,000 gallons/day
Normal Production: 7,500 gallons/day
Normal Consumption: 6,500 gallons/day
Storage Capacity: 24,000 gallons

POLLUTION CONTROL

Type of Treatment: Bacterial Digestion
Sewage Holding Tank Capacity: 6,500 gallons (3 days)
Oily Waste Holding Tank Capacity: 3,000 gallons

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS *	2	Detroit Diesel/ Delco	500 KW, 625 KVA	450 V	120 VAC Single Phase 220 VAC Three Phase 440 VAC Three Phase
EMERGENCY GENERATOR	1	Detroit Diesel/ Delco	125 KW, 157 KVA	450 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Capacity</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
LIFEBOATS	2	24'		Marine Safety Equipment Corp.	Diesel
UTILITY BOATS :	2	(1) 16'	5 pers.	Boston Whaler	Outboard Motor
		(1) 12'	4 pers.	Zodiac	Outboard Motor

* NOTE: The 500 KW Diesel Generator for Bow Thruster may be operated in parallel with Ship Service Generators.



SURVEYOR S132

LAUNCHED: April 25, 1959
 DELIVERED: April 29, 1960
 COMMISSIONED: April 30, 1960

DESIGNER: Maritime Administration
 BUILDER: National Steel &
 Shipbuilding Company
 San Diego, California

CALL LETTERS: WTES

SISTER SHIPS:

HOME PORT: Seattle, Washington

GROSS TONNAGE: 2,653
 NET TONNAGE: 682
 DISPLACEMENT: 3,150
 HULL: Welded steel w/ice
 strengthening
 LENGTH (LOA): 292'2" (89 meters)
 BREADTH (Moulded): 46' (14 meters)
 DRAFT, MAXIMUM: 18' (5.5 meters)
 DRAFT, MEAN: 16' (4.9 meters)

CRUISING SPEED: 11 knots
 RANGE: 13,117 Nautical Miles
 SHAFT HORSEPOWER: 2,500
 FUEL: NSFO
 FUEL CAPACITY: 250,000 gallons
 FUEL CONSUMPTION: 170 gallons/hour

ENDURANCE - Max.: 27 days
 CONSTRAINT: Fuel
 NORMAL: 14-21 days

FLIGHT DECK: Yes, permanent.

SCIENTIFIC CAPABILITY

Nautical charting/offshore oceanographic operations.

Dry Oceanographic Lab 105 sq.ft.
 Wet Oceanographic Lab 120 sq.ft.
 Photographic Lab 102 sq.ft.
 Diving Locker 56 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 12
 SHIP'S OFFICERS & CREW: 64
 SCIENTISTS: 20

BERTHING

ONE-BUNK STATEROOMS: 13
 TWO-BUNK STATEROOMS: 23
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 16
 FIVE-BUNK STATEROOMS:
 SIX-BUNK STATEROOMS: 1
 TOTAL BUNKS: 129

MESSING

CABIN MESS: 6 persons/seating
 WARDROOM MESS: 24 persons/seating
 SHIP'S OFFICERS' MESS: 16 persons/seating
 TECHNICIANS'S MESS:
 CREW MESS: 52 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 6
 MEDICINE CHEST: Complete inventory,
 including controlled drugs.

ADMINISTRATOR: Chief Pharmacist Mate

DECK MACHINERY

WINCHES

	OCEANOGRAPHIC WINCH	DEEP SEA WINCH
Quantity:	1	1
Manufacturer:	Jered Industries, Inc.	Western Gear
Drive:	Electro-Hydraulic	Electro-Hydraulic
Line Pull Rate:	4,800 ft.-lbs.	3,000 ft.-lbs.
Max. Pull Rate:	30 ft./sec.	4 ft./sec.
Drum Capy	9,000 ft. - 3/8" dia. wire	1,000 ft. - 3/8" dia. wire

	TRAWL WINCH .	OCEANOGRAPHIC-HYDROGRAPHIC WINCH
Quantity:	1	1
Manufacturer:	Rowe Machine Works	Wheeler Winch Company
Drive:	Electro-Hydraulic	
Line Pull Rate:	2,000 ft.-lbs.	
Max. Pull Rate:	25 ft./sec.	
Drum Capy - Min.:	5,690 ft. -	
- Max.:	3/8" dia. wire	
Regulated Drum Speed:		

CRANES AND BOOMS

	FORWARD CRANE	AFT CRANE
Quantity:	2	1
Manufacturer:	Autin-Weatern Corp.	Western Gear Corp
Type:	Telescoping Boom	
Rotation:	360°	360°
Radius - Max.:	24'0"	33'6"
- Min.:	12'6"	14'10"
Hoisting Capy:- Max.:	1,400 lbs. @ 12'6"	25,000 lbs. @ 22'6"
Min.:	1,000 lbs. @ 24'0"	

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

	GALLOWS FRAME
Quantity:	1
Type:	Non-Movable
Clearance:	6' (over the side)
General Location:	

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	2	2
Type:	Stockless	
Weight/Length:	5,100 lbs. (each)	150 fathoms
Chain Size:		1-11/16 inch
Weight/Shot:		2,530 lbs.

	SPARE BOW ANCHORS	DEEP SEA CABLE
Quantity:	1	
Type:	Stockless	
Weight:	4,340 lbs.	
Length:		
Size:		

	ANCHOR WINDLASS
Quantity:	1
Type:	Capstan/Windlass (Vertical Shaft Type)
Manufacturer:	Hyde Windlass Corp.
Drive:	Electro-Hydraulic

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	4	2 CAI 2 Collins	1 KW 1 KW
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS	2	ITT	40 W 500 W
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	ITT	2 W
RADIO AUTO ALARM RECEIVER	1	ITT	
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]		-- Yes, is equipped with EPIRB	

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV	1	JMR	
LORAN-A	2	Benmar	ATL-730
LORAN-C	2	Internav	LC-204
OMEGA			
RDF	1	RCA	AR-8714
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1 9	Sperry	
OTHER: SATELLITE	1	JMR	
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	5 1	Ross Raytheon	100 KHZ 21 KHZ
DEEP WATER ECHO SOUNDER	2	Raytheon	12 KHZ
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	1		PDP 8/3
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Steam Turbine

PROPULSION BOILERS

Quantity: 2
Type: Watertube
Manufacturer: Combustion Engineering, Inc.
Design Pressure: 465 PSI
Superheat Temp.: 750°F

PROPULSION TURBINES

2
De Laval

REDUCTION GEAR

Quantity: 1
Manufacturer: De Laval
Ratio: 5.84:1
Drive:
Rating:

AUXILLIARY PROPULSION

1
Harbormaster (stern mounted)
Electric
200 Horsepower

PROPELLERS

Quantity: 1
Type: Fixed Pitch
Manufacturer:
No. of Blades: 4
Diameter: 13 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

Quantity: 1
Type:
Manufacturer: Cleaver-Brooks Special Products
Max. Production: 7,000 gallons/day
Normal Production: 7,000 gallons/day
Normal Consumption: 5,000 gallons/day
Storage Capacity: 46,950 gallons

POLLUTION CONTROL

Type of Treatment:
Sewage Holding Tank Capacity: 5 days
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Worthington Turbine/GE	400 KW, 500 KVA	450 VAC	110 VAC single phase 450 VAC three phase
EMERGENCY GENERATOR	1	Detroit Diesel/Delco	400 KW	450 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	2	36'	Wood		Diesel
				(Capacity)	
UTILITY BOATS	7				
	1	21'		16 persons	Inboard Diesel
	1	36'		10 persons	Inboard Diesel
	1	32'			Inboard Diesel
Boston Whaler	1	16'			Outboard
Zodiac	1	12'			Outboard

FAIRWEATHER S220



LAUNCHED: March 15, 1967
 DELIVERED: January 31, 1968
 COMMISSIONED: October 2, 1968

DESIGNER: Maritime Administration
 BUILDER: Aerojet-General Shipyards
 Jacksonville, Florida

CALL LETTERS: WTEB

SISTER SHIPS: MT. MITCHELL
 RAINIER

HOME PORT: Seattle, Washington

GROSS TONNAGE: 1,591
 NET TONNAGE: 578
 DISPLACEMENT: 1,800 tons
 HULL: Welded Steel/Ice Strength

LENGTH (LOA): 231.00 ft. (70.4 m.)
 BREADTH (Moulded): 44.00 ft. (13.4 m.)
 DRAFT, MAXIMUM: 13.75 ft. (4.19 m.)
 DRAFT, MEAN: 13.00 ft. (3.96 m.)

CRUISING SPEED: 13 knots
 RANGE: 9,000 nautical miles
 SHAFT HORSEPOWER: 2,400
 FUEL: #2 Diesel
 FUEL CAPACITY: 110,000 gallons
 FUEL CONSUMPTION: 75 gal/hr

ENDURANCE:
 MAX. CONSTRAINT: 22 days (fuel)

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

The FAIRWEATHER is designed and outfitted for hydrographic surveys involving nautical charting. Scientific equipment normally on board is limited to that equipment which normally supports and is related to these survey operations.

Oceanographic Lab 575 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 12
 SHIP'S OFFICERS & CREW: 57
 SCIENTISTS: 4

BERTHING

ONE-BUNK STATEROOMS: 5
 TWO-BUNK STATEROOMS: 17
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 10
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 79

MESSING

WARDROOM MESS: 12 persons/seating
 SHIP'S OFFICERS' MESS: 11 persons/seating
 TECHNICIANS'S MESS: 13 persons/seating
 CREW MESS: 36 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 2
 MEDICINE CHEST: Complete inventory including controlled drugs
 ADMINISTRATOR: Medical Technician

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Tacoma Boat Building Co.
Drive: Electric/Hydraulic
Line Pull Rate: 1,500 lbs.
Max. Pull Rate: 400 ft./min.
Drum Capy - Upper: 10,000 ft., .30" dia. electric cable
- Lower: 15,000 ft., 3/16" dia. electric cable
Regulated Drum Speed:

DREDGE AND . TRAWL WINCH

Quantity: 1
Manufacturer: Tacoma Boat Building Co.
Drive: Electric/Hydraulic
Line Pull Rate: 2,000 lbs.
Max. Pull Rate:
Drum Capy - Min.:
- Max.: 6,000 ft., 3/8" dia. wire
Regulated Drum Speed:

CRANES AND BOOMS

MAIN CRANE

Quantity:
Manufacturer: Skagit Corp.
Type: Telescoping Boom
Rotation: 360°
Radius - Max.: 40 ft.
- Min.: 12 ft.
Hoisting Capy -
Max. Radius: 5,000 lbs.
Min. Radius: 5,000 lbs.

AUXILLIARY CRANES

2
Skagit Corp.
Telescoping Boom
360°
13 ft.
25 ft.
3,000 lbs.
2,500 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

OCEANOGRAPHIC

Quantity: 2
Type: Movable
Clearance: 3 ft. (over the side)
General Location:

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	3	2
Type:	Stockless	HS Welded Stud
Weight/Length:	3,000 lbs. (each)	165 Fathoms
Chain Size:		1-3/8 in.
Weight/Shot:		1,705 lbs.
	DEEP SEA ANCHOR	DEEP SEA CABLE
Quantity:	1	1
Type:	Stockless	Improved Plow Steel Wire Rope
Weight:		
Length:		1,800 ft.
Size:		3/8-in. dia., 6x19
	ANCHOR WINDLASS	
Quantity:	1	
Type:	Horizontal Shaft	
Manufacturer:	Northern Line Machine & Engineering Co.	
Drive:	Hydarulic/Electric	

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	3	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	1 Collins 1 CA1 1 Northern	1 KW 150 W 150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2 W
RADIO AUTO ALARM RECEIVER	Yes.		
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	6		
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A			
LORAN-C	2	Benmar	
OMEGA			
RDF	1	RCA	
LINE OF SIGHT POSITIONING EQUIPMENT	3	Motorola	
MEDIUM RANGE POSITIONING EQUIPMENT	4	Raydist	
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	6	2 Raytheon 4 Ross	100 KHz 100 KHz
DEEP WATER ECHO SOUNDER	2	Edo	12 KHz
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	4	Digital Equipment Co.	PDP8E
HYDROPLOT CONTROLLER		Digital Equipment Co.	
COMPUTER INCREMENTAL PLOTTER		Houston Instruments	#DP-3

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: E.M.D. General Motors Corp.

REDUCTION GEAR

Quantity: 2
Manufacturer: Lufkin Marine
Ratio: 3.595:1
Drive:
Rating:

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: Byrd-Johnson (KaMeWa)
No. of Blades: 3
Diameter: 8' 6-3/8"

BOW THRUSTER

Type: Through Hull
Drive: Diesel
Manufacturer: Detroit Diesel
Rating: 200 Horsepower
Drive Train: Philadelphia Gear Corp.

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type:
Manufacturer: Cuno Engineering Corp.
Max. Production: 6,000 gal./day
Normal Production: 3,000 gal./day
Normal Consumption: 3,200 gal./day
Storage Capacity: 16,000 gal./day

POLLUTION CONTROL

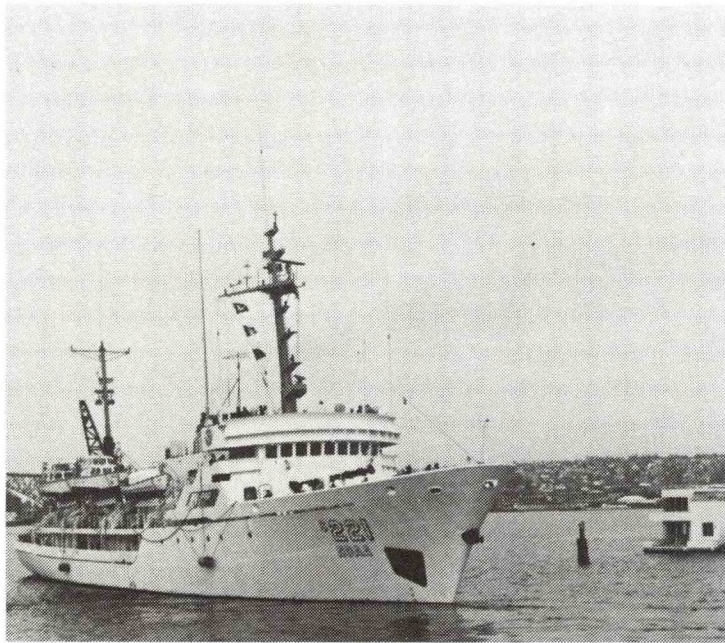
Type of Treatment: Macerator-Chorinator
Sewage Holding Tank Capacity: 8,247 gal. (3 days)
Oily Waste Holding Tank Capacity: 6,850 gal.

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/ Gen. Electric	300.00 KW 375.00 KVA	450 V	120 VAC single phase 450 VAC three phase
EMERGENCY GENERATOR	1	Detroit Diesel/ Delco	75.00 KW 93.75 KVA	450 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	3	29'	Aluminum	Jensen	Diesel
	1	31'	Wood	Pacific Best	Diesel
UTILITY BOATS					
Motor Whale Boats	1	16'	Fiberglass	Boston Whaler	Gasoline Outboard
	2	16'	Fiberglass	U.S. Navy	Diesel



RAINIER S221

LAUNCHED: March 15, 1967
 DELIVERED: April 24, 1968
 COMMISSIONED: October 2, 1968

DESIGNER: Maritime Administration
 BUILDER: Aerojet-General Shipyards
 Jacksonville, Florida

CALL LETTERS: WTEF

SISTER SHIPS: FAIRWEATHER
 MT. MITCHELL

HOME PORT: Seattle, Washington

GROSS TONNAGE: 1,591
 NET TONNAGE: 578
 DISPLACEMENT: 1,800
 HULL: Welded Steel,
 ice strengthened
 LENGTH (LOA): 231' 0" (70.41 meters)
 BREADTH (Moulded): 42' 0" (12.80 meters)
 DRAFT, MAXIMUM: 13' 9" (4.19 meters)
 DRAFT, MEAN: 10' 10" (3.30 meters)

CRUISING SPEED: 12.5 knots
 RANGE: 6,600 nautical miles
 SHAFT HORSEPOWER: 2,400
 FUEL: #2 Diesel
 FUEL CAPACITY: 106,000 gallons
 FUEL CONSUMPTION: 125 gallons/hour

ENDURANCE: 22 days
 CONSTRAINT: Fuel

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

The RAINIER is designed and outfitted for hydrographic surveys involving nautical charting. Scientific equipment normally on board is limited to that equipment which supports and is related to these survey operations.

Oceanographic Lab 575 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 12
 SHIP'S OFFICERS & CREW: 57
 SCIENTISTS: 4

BERTHING

ONE-BUNK STATEROOMS: 5
 TWO-BUNK STATEROOMS: 17
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 10
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 79

MESSING

CABIN MESS: 4 persons/seating
 WARDROOM MESS: 12 persons/seating
 SHIP'S OFFICERS' MESS: 10 persons/seating
 TECHNICIANS'S MESS: 18 persons/seating
 CREW MESS: 24 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 2
 MEDICINE CHEST: Complete inventory,
 including controlled drugs.

ADMINISTRATOR: Medical Technician

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Northern Line Machine Co.
Drive: Electro/Hydraulic
Line Pull Rate: 3,000 ft.-lbs.
Max. Pull Rate: 400 ft./sec.
Drum Capy - Min.: 12,000 ft., 298" electric cable
- Max.: 30,000 ft., 3/16" dia. wire
(interchangeable drum)

DREDGE & TRAWL WINCH

Quantity: 1
Manufacturer: Northern Line Machine Co.
Drive: Electro/Hydraulic
Line Pull Rate: 3,000 ft.-lbs.
Max. Pull Rate: 400 ft./sec.
Drum Capy: 6,000 ft., 3/8" dia. wire
(interchangeable drum)

CRANES AND BOOMS

FORWARD CRANES

Quantity: 2
Manufacturer: Skagit Corp.
Type: Telescoping Boom
Rotation: 360°
Radius - Max.: 25 ft.
- Min.: 13 ft.
Hoisting Capy -
Min. Radius: 3,000 lbs.
Max. Radius: 2,500 lbs.

AFT CRANE

1
Skagit Corp.
Non-telescoping Boom
40 ft.
12 ft.
5,000 lbs.
2,500 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

Quantity: 2
Type: Movable
Clearance: 5 ft. (over the side)
General Location:

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Stockless
Weight/Length: 3,000 lbs.
Chain Size:
Weight/Shot:

ANCHOR CHAINS

2
Welded Steel Stud Link
165 fathoms
1-3/8" dia.
1,705 lbs.

DEEP SEA ANCHOR

Quantity: 1
Type: Stockless
Weight: 700 lbs.
Length:
Size:

DEEP SEA ANCHOR CABLE

1
Wire Rope
1,800 ft.
1-3/8" dia.

ANCHOR WINDLASS

Quantity: 1
Type: Horizontal Shaft
Manufacturer: Northern Line
Drive: Electro-hydraulic through a
reversible transmission.

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	6	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	4	(1) Collins (2) Scientific Radio (1) CAI	1 KW 1 KW 150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS	2	RCA	40 W 500 W
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2 W
RADIO AUTO ALARM RECEIVER	1	RCA	
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	4	Narco Marine	75 mW

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A			
LORAN-C	2	Benmar	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT	3	Motorola	
MEDIUM RANGE POSITIONING EQUIPMENT	3	Raydist	
GYRO COMPASS (Repeaters)	1	Sperry	

OTHER:

ACOUSTICS

SHALLOW WATER ECHO SOUNDER	8	(4) Ross (4) Raytheon	100 KHz 21 KHz
DEEP WATER ECHO SOUNDER	2	Edo	12 KHz
NARROWBEAM ECHO SOUNDER			

FISH FINDER

STEERABLE SONAR

OTHER:

DATA ACQUISITION SYSTEM

COMPUTERS	4	Digital Equipment Co.	PD8E
HYDROPLOT CONTROLLER		Digital Equipment Co.	
COMPLIT INCREMENTAL PLOTTER		Houston Instruments	DP-3

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: E.M.D. General Motors
Ratio:

REDUCTION GEAR

2
Lufkin Foundry & Machine Co.
3.595:1

BOW THRUSTER

Quantity: 1
Manufacturer: Detroit Diesel
Ratio:
Drive Train: Byrd-Johnson
Rating: 200 horsepower

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: Byrd-Johnson (KaMeWa)
No. of Blades: 3
Diameter: 8.5 feet

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type:
Manufacturer: Cuno Engineering Corp.
Max. Production: 6,000 gallons/day
Normal Production: 3,000 gallons/day
Normal Consumption: 3,000 gallons/day
Storage Capacity: 16,000 gallons

POLLUTION CONTROL

Type of Treatment: Macerator/Chlorinator
Sewage Holding Tank Capacity: 8,247 gallons (3 days)
Oily Waste Holding Tank Capacity: 6,850 gallons

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/ General Electric	300 KW	450 V	450 VAC Three Phase 115 VAC Three Phase 24 VDC, 1.5 KW 15 VDC
EMERGENCY GENERATOR	1	Detroit Diesel/ Delco	75 KW, 93.75 KVA	450 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	4	(3) 29'	Aluminum	Jensen	Diesel
		(1) 26'	Fiberglass	Bertram	Diesel
UTILITY BOATS	3	(2) 26'	Fiberglass	U.S. Navy	Diesel
		(1) 16'	Fiberglass	Boston Whaler	Gasoline Outboard

MT. MITCHELL S222

LAUNCHED: November 29, 1966
 DELIVERED: October 30, 1967
 COMMISSIONED: March 23, 1968

DESIGNER: Maritime Administration
 BUILDER: Aerojet-General Shipyards
 Jacksonville, Florida

CALL LETTERS: WTEG

SISTER SHIPS: RAINIER
 FAIRWEATHER

HOME PORT: Norfolk, Virginia



GROSS TONNAGE: 1,591
 NET TONNAGE: 578
 DISPLACEMENT: 1,800
 HULL: Welded Steel,
 ice strengthened
 LENGTH (LOA): 231 feet (71 meters)
 BREADTH (Moulded): 42 feet (12.8 meters)
 DRAFT, MAXIMUM: 14 feet (4.3 meters)
 DRAFT, MEAN: 13 feet (2.1 meters)

CRUISING SPEED: 12.5 knots
 RANGE: 9,000 nautical miles/
 (at cruising speed)
 SHAFT HORSEPOWER: 2,400
 FUEL: #2 Diesel Oil
 FUEL CAPACITY: 107,000 gal.
 FUEL CONSUMPTION: 125 gal./hr.

ENDURANCE: 22 days
 CONSTRAINT: Fuel

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

The MT. MITCHELL is designed and outfitted for hydrographic surveys involving nautical charting. Scientific equipment normally on board is limited to that equipment which normally supports and is related to these survey operations.

Oceanographic Lab 575 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 12
 SHIP'S OFFICERS & CREW: 57
 SCIENTISTS: 4

BERTHING

ONE-BUNK STATEROOMS: 5
 TWO-BUNK STATEROOMS: 17
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 10
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 79

MESSING

CABIN MESS 4 pers./seating
 WARDROOM MESS: 16 pers./seating
 SHIP'S OFFICERS' MESS: 11 pers./seating
 TECHNICIANS'S MESS: 16 pers./seating
 CREW MESS: 16 pers./seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 2
 MEDICINE CHEST: Complete inventory,
 including controlled
 drugs
 ADMINISTRATOR: Medical Technician

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCHES

Quantity: 2
Manufacturer: Northern Line
Drive: Electro-Hydraulic
Line Pull: 3,000 lbs.
Max. Pull Rate: 400 ft./min.
Drum Capy - Min.: 12,000 ft., .298 in. dia. conductor cable
- Max.: 30,000 ft., 3/16 in. dia. wire

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
- Max.:
Regulated Drum Speed:

CRANES AND BOOMS

FORWARD CRANE

Quantity: 2
Manufacturer: Skagit Corp.
Type: Telescoping Boom
Rotation: 360°
Radius - Max.: 25 ft.
- Min.: 13 ft.
Hoisting Capy
- Max.: 3,000 lbs.
- Min.: 2,500 lbs.

AFT CRANE

1
Skagit Corp.
Non-Telescoping Boom
360°
40 ft.
5,000 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

OCEANOGRAPHIC

Quantity: 2
Type: Movable
Clearance: 3 ft. (over the side)
General Location:

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	3	2
Type:	Stockless	Stud Link
Weight/Length:	3,000 lbs. (each)	165 fathoms
Chain Size:		1-3/8 in.
Weight/Shot:		1,705 lbs.
	DEEP SEA ANCHOR	DEEP SEA ANCHOR CABLE
Quantity:	1	
Type:	Stockless	Wire Rope
Weight:	700 lbs.	
Length:		1,800 ft.
Size:		1-3/8 in. dia.
	ANCHOR WINDLASS	
Quantity:	1	
Type:	Horizontal Shaft	
Manufacturer:	Northern Line	
Drive:	Electro-Hydraulic thru a reversible transmission	

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	1 Collins 1 Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	1 R.F. Communications 2 Collins	150 W 1 KW
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2 W
RADIO AUTO ALARM RECEIVER	1	RCA	
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	4	NARCO Marine	75 KW
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A			
LORAN-C	3	1 Internav 2 RCA	
OMEGA	1	Tracor	
RDF	2	1 Peirce 1 RCA	
LINE OF SIGHT POSITIONING EQUIPMENT	1	DNTI	
MEDIUM RANGE POSITIONING EQUIPMENT	2	Decca	
GYRO COMPASS	1	Sperry	

OTHER:

ACOUSTICS

SHALLOW WATER ECHO SOUNDER	6	3 Ross 3 Raytheon	100 KHz 21 KHz
DEEP WATER ECHO SOUNDER	2	EDO	12 KHz
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			

OTHER:

DATA ACQUISITION SYSTEM

COMPUTERS	4	Digital Equipment Co.	#PDP8E
HYDROPLOT CONTROLLER		Digital Equipment Co.	
COMPUTER INCREMENTAL PLOTTER		Houston Instruments	#DP-3

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: E.M.D. General Motors Corp.

REDUCTION GEAR

Quantity: 2
Manufacturer: Lufkin Marine
Ratio: 3.595:1

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: Byrd-Johnson (KaMeWa)
No. of Blades: 3
Diameter: 8.5 ft.

BOW THRUSTER

Type: Through Hull
Drive: Diesel
Manufacturer: Detroit Diesel
Rating: 200 Horsepower
Drive Train: Philadelphia Gear Corp.

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type:
Manufacturer: Cuno Engineering Corp.
Max. Production: 6,000 gal./day
Normal Production: 3,000 gal./day
Normal Consumption: 3,000 gal./day
Storage Capacity: 16,500 gal./day

POLLUTION CONTROL

Type of Treatment: Bacterial Aerobic Digestion
Sewage Holding Tank Capacity:
Oily Waste Holding Treatment: Oily Water Separator

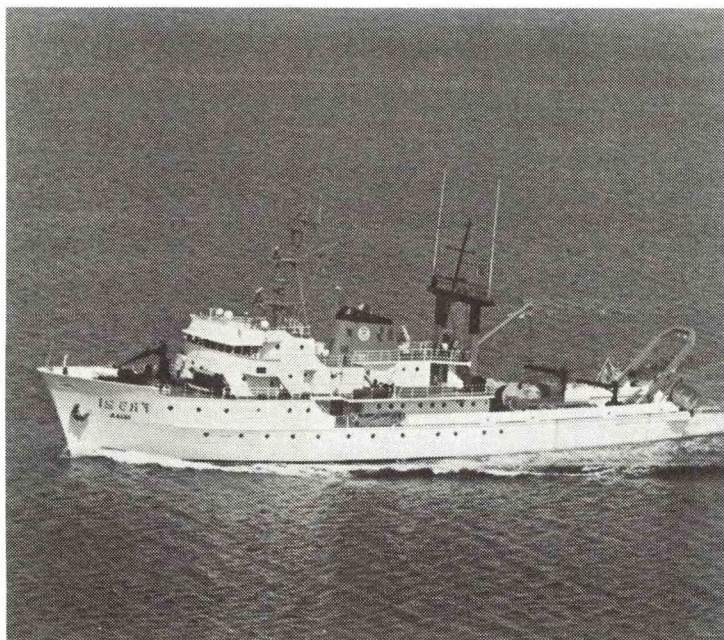
ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/GE	300 KW 375 kva	450 V	120 VAC Single Phase 120 VAC Three Phase 440 VAC Three Phase
EMERGENCY GENERATOR	1	Detroit Diesel/Delco	75 KW, 93.75 kva	440 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	3	29'	Aluminum	Jensen	Diesel
	1	26'	Fiberglass	Pacific Plastics	Diesel

UTILITY BOATS



MILLER FREEMAN R223

LAUNCHED:
 DELIVERED: 1967
 COMMISSIONED: 1974

DESIGNER: Philip F. Spaulding
 BUILDER: American Shipbuilding Co.
 Lorain, Ohio

CALL LETTERS: WTDM

SISTER SHIPS:

HOME PORT: Seattle, Washington

GROSS TONNAGE: 1,515
 NET TONNAGE: 680
 DISPLACEMENT: 1,920 tons
 HULL: Welded Steel

LENGTH (LOA): 215'0" (66.0 meters)
 BREADTH (Moulded): 42'0" (12.5 meters)
 DRAFT, MAXIMUM: 18'3" (5.4 meters)
 DRAFT, MEAN: 16'2" (4.7 meters)

CRUISING SPEED: 13 knots
 RANGE: 15,000 nautical miles
 SHAFT HORSEPOWER: 2,150
 FUEL: #2 Diesel
 FUEL CAPACITY: 142,000 gallons
 FUEL CONSUMPTION: 100 gal./hr.

ENDURANCE: 45 days

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

Fisheries Research.

Dry Oceanographic Lab 717 sq.ft.
 Wet Oceanographic Lab 897 sq.ft.
 X-BT Room 160 sq.ft.
 Fish Processing Lab 425 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 7
 SHIP'S OFFICERS & CREW: 33
 SCIENTISTS: 11

BERTHING

ONE-BUNK STATEROOMS: 3
 TWO-BUNK STATEROOMS: 22
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 1
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 51

MESSING

WARDROOM MESS: 20 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS: 20 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid capability only.

ADMINISTRATOR: Executive Officer.

DECK MACHINERY

WINCHES

	OCEANOGRAPHIC WINCH	OCEANOGRAPHIC WINCH
Quantity:	1	1
Manufacturer:	Marco	Marco
Drive:	Hydraulic	Hydraulic
Line Pull Rate:	10,000 ft.-lbs.	2,750 ft.-lbs.
Max. Pull Rate:	328 ft./min.	250 ft./min.
Drum Capy - Min.:	19,685 ft. - 7/16" dia. wire	30,000 ft. - 3/16" dia. wire
- Max.:		
Regulated Drum Speed:		

	OCEANOGRAPHIC WINCH	TRAWL WINCH
Quantity:	1	2
Manufacturer:	Hytech	Northern Line
Drive:	Hydraulic	Hydraulic
Line Pull Rate:	1,050 ft.-lbs.	22,000 ft.-lbs.
Max. Pull Rate:	100 ft./min.	175 ft./min.
Drum Capy - Min.:	9,840 ft. - .294 dia.	3,300 ft. - 1.0" dia. wire
- Max.:	electrical conductor cable	
Regulated Drum Speed:		

CRANES AND BOOMS

	OCEANOGRAPHIC/UTILITY CRANE	UTILITY CRANE
Quantity:	2	1
Manufacturer:	Rowe Marine Machinery	Daybrook
Type:	Telescoping Boom	Articulated Boom
Rotation:	360°	360°
Radius - Max.:	28 ft.	18 ft.
- Min.:		
Hoisting Capy:	6,000 lbs. (min. radius)	4,000 lbs. (min. radius)

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

	STERN GANTRY	MIDSHIP A-FRAME
Quantity:	1	2
Type:		
Clearance:		8 ft. (over the side)
General Location:		
Capy:	20,000 lbs.	

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	3	2
Type:	Stockless	Stud Link
Weight/Length:	3,815 lbs. (each)	120 fathoms
Chain Size:		1-7/16"
Weight/Shot:		1,865 lbs.

Quantity:
Type:
Weight:
Length:
Size:

Quantity:
Type:
Manufacturer:
Drive:

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	(2) Sunair (1) CAI	1 KW 150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	ITT	2 W
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	4	Narco Marine	75 mW

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV	2	JMR	
LORAN-A	1	North Star	
LORAN-C	2	Internav	
OMEGA			
RDF	1	Apelco	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	3	(2) Ross (1) Raytheon	100 KHZ 21 KHZ
DEEP WATER ECHO SOUNDER	1	Edo	12 KHz
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPLIT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 1
Type:
Manufacturer: E.M.D. General Motors
Ratio:

REDUCTION GEAR

1
Lufkin Marine
4.22:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity: 1
Type: Controllable Pitch
Manufacturer: Byrd-Johnson
No. of Blades: 3
Diameter: 122"
Length:

BOW THRUSTER

Type: Retractable
Drive: Electric
Manufacturer: Schottle
Rating: 400 horsepower
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type:
Manufacturer: Cuno Engineering Corp.
Max. Production: 2,400 gallons/day
Normal Production: 2,000 gallons/day
Normal Consumption: 1,800 gallons/day
Storage Capacity: 7,350 gallons

POLLUTION CONTROL

Type of Treatment: Macerator/Chlorinator
Sewage Holding Tank Capacity: 7,580 gallons (5 days)
Oily Waste Holding Tank Capacity: Bilge retention only

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Caterpillar/ General Electric	350 KW	450 V	120 VAC Three Phase 450 VAC Three Phase
EMERGENCY GENERATOR	1	Caterpillar/ General Electric	100 KW	450 VAC	450 VAC Three Phase

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	3	(1) 26' (1) 17' (1) 14'	Fiberglass Aluminum Rubber	Whale Boat Monark Zodiak	Diesel Inboard Outboard Motor Outboard Motor

PEIRCE S328

LAUNCHED: October 15, 1962
DELIVERED: May 6, 1963
COMMISSIONED: May 6, 1963

DESIGNER: Maritime Administration
BUILDER: Marietta Manufacturing Co.
Pt. Pleasant, West Virginia

CALL LETTERS: WTEQ

SISTER SHIPS: WHITING

HOME PORT: Norfolk, Virginia



GROSS TONNAGE: 696
NET TONNAGE: 151
DISPLACEMENT: 760 tons
HULL: Welded Steel,
Ice Strengthened
LENGTH (LOA): 163.0 ft. (49.7 meters)
BREADTH (Moulded): 33.0 ft. (10.1 meters)
DRAFT, MAXIMUM: 11.5 ft. (3.5 meters)
DRAFT, MEAN: 10.0 ft. (3.0 meters)
CRUISING SPEED: 11.5 knots
RANGE: 5,700 nautical miles
SHAFT HORSEPOWER: 1,600
FUEL: #2 Diesel
FUEL CAPACITY: 44,000 gallons
FUEL CONSUMPTION: 80 gal./hr.
(at cruising speed)
ENDURANCE: 20 days (fuel)
14 days (stores)

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Hydrographic surveys and nautical
nautical charting.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 8
SHIP'S OFFICERS & CREW: 30
SCIENTISTS: 2

BERTHING

ONE-BUNK STATEROOMS: 2
TWO-BUNK STATEROOMS: 9
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS: 5
FIVE-BUNK STATEROOMS:
TOTAL BUNKS: 40

MESSING

WARDROOM MESS: 8 persons/seating
SHIP'S OFFICERS' MESS:
TECHNICIANS'S MESS:
GENERAL MESS: 24 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 0
MEDICINE CHEST: First Aid and
some controlled drugs.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Northern Line
Drive: Hydraulic
Line Pull Rate: 1,500 ft.-lbs.
Max. Pull Rate:
Drum Capy - Min.: 12,000 ft. of .30" wire
- Max.: 30,000 ft. of 3/16" wire
Regulated Drum Speed:

BATHYTHERMOGRAPH WINCH

Quantity: 1
Manufacturer: Hyde Windlass Co.
Drive: Electric
Line Pull Rate: 400 ft.-lbs.
Max. Pull Rate:
Drum Capy: 3,000 ft. of 3/32" wire

CAPSTAN WINCH

1
C. H. Wheeler Mfg. Co.
Electric, 15 HP

CRANES AND BOOMS

UTILITY CRANE

Quantity: 1
Manufacturer: C. H. Wheeler Manufacturing Co.
Type: Telescoping Boom
Rotation: 180°
Radius - Max.: 27 ft.
- Min.: 15 ft.
Hoisting Capy: 2,500 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	2	2
Type:	Navy Stockless	Navy Die-Lock
Weight/Length:	Starboard: 2,050 lbs. Port: 1,775 lbs.	105 fathoms (each)
Chain Size:		1-1/8"

	STERN ANCHOR
Quantity:	1
Type:	Navy Stockless
Weight:	950 lbs.
Length:	
Size:	

	ANCHOR WINDLASS
Quantity:	1
Type:	Double winch head, horizontal spur gear
Manufacturer:	C. H. Wheeler Manufacturing Co.
Drive:	Electric (13,760 ft.-lbs. at 30 ft./min.)

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	2	(1) RF Communications (1) Collins	150 KW 1 KW
RADIO TELETYPE CAPABILITY	-- vessel has capability.		
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY	-- vessel is equipped. [Emergency Position Indicating Radiobeacon (EPIRB)]		
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A	1	Sperry	
LORAN-C	2	Internav	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT		DeINorte	
MEDIUM RANGE POSITIONING EQUIPMENT		Raydist	
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	5	(3) Ross (2) Raytheon	100 KHZ 21 KHZ
DEEP WATER ECHO SOUNDER	1	Raytheon	12 KHZ
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	3 (2 on launches)	Digital Equipment Co.	PDP 8E
HYDROPLOT CONTROLLER		Hazlow Navigation Interface	
COMPLIT INCREMENTAL PLOTTER		Houston Instruments	DP-3

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

	MAIN ENGINES	REDUCTION GEAR
Quantity:	2	2
Type:	Diesel	VQ1814
Manufacturer:	General Motors Corp.	Lufkin
Ratio:		2.35:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: KaMeWa
No. of Blades: 3
Diameter: 6 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 1
Type: Four-Stage Flash
Manufacturer: Griscomb Russel Co.
Max. Production: 1,800 gal./day
Normal Production:
Normal Consumption: 1,800 gal./day
Storage Capacity: 5,400 gal.

POLLUTION CONTROL

Type of Treatment: Aerobic Bacterial
Sewage Holding Tank Capacity: 30 days
Oily Waste Holding Tank Capacity: Bilge Retention
Manufacturer: St. Louis Ship

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel (GM)/Delco	220 KW	225V/450V	450 VAC Three Phase 220 VAC Single Phase 120 VAC Single Phase
EMERGENCY GENERATOR	1	Detroit Diesel (GM)/Delco	60 KW	225VAC/ 450VAC	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	2	29'	Aluminum	Jensen	Diesel
UTILITY BOATS	3	18'	Fiberglass		Gas. Outboard Motor
		13'	Fiberglass		Gas. Outboard Motor
(Rescue Boat)		17'	Aluminum		Gas. Outboard Motor



WHITING S329

LAUNCHED: November 20, 1962.
 DELIVERED: July 8, 1963
 COMMISSIONED: July 8, 1963

DESIGNER: Maritime Administration
 BUILDER: Marietta Manufacturing Co.
 Point Pleasant, W.Va.

CALL LETTERS: WTEW

SISTER SHIPS: PEIRCE

HOME PORT: Norfolk, Virginia

GROSS TONNAGE: 696
 NET TONNAGE: 151
 DISPLACEMENT: 760 tons
 HULL: Welded Steel,
 Ice Strengthened
 LENGTH (LOA): 163.0 feet (49.7 meters)
 BREADTH (Moulded): 33.0 feet (10.1 meters)
 DRAFT, MAXIMUM: 11.5 feet (3.5 meters)
 DRAFT, MEAN: 10.0 feet (3.0 meters)

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 8
 SHIP'S OFFICERS & CREW: 30
 SCIENTISTS: 2

BERTHING

ONE-BUNK STATEROOMS: 2
 TWO-BUNK STATEROOMS: 9
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 5
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 40

CRUISING SPEED: 11.5 knots
 RANGE: 5,700 Nautical Miles
 SHAFT HORSEPOWER: 1,600
 FUEL: #2 Diesel Oil
 FUEL CAPACITY: 44,000 gallons
 FUEL CONSUMPTION: 80 gallons/hour

MESSING

WARDROOM MESS: 8 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:
 GENERAL MESS: 24 person/seating

ENDURANCE: 20 Days (Fuel)
 14 Days (Stores)

FLIGHT DECK: No

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 0
 MEDICINE CHEST: First Aid and some
 controlled drugs aboard.

SCIENTIFIC CAPABILITY

The WHITING was initially designed and outfitted for hydrographic surveys involving nautical charting. Scientific equipment normally on board is limited to that equipment which normally supports and is related to these survey operations.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Tacoma Boat Building, Inc.
Drive: Hydraulic
Line Pull Rate: 1,500 ft./lbs.
Max. Pull Rate:
Drum Capy: 10,000 ft. of 1/4" wire

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
 - Max.:
Regulated Drum Speed:

CRANES AND BOOMS

MAIN CRANE

Quantity: 1
Manufacturer: C. H. Wheeler Manufacturing Co., Inc.
Type: Telescoping Boom
Rotation: 180°
Radius - Max.: 27 ft.
 - Min.: 15 ft.
Hoisting Capy: 2,500 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy:

A-FRAMES

Quantity: 1
Type: Movable
Clearance: 5 ft.
General Location: Starboard side aft
Weight Capacity: 1,500 lbs.

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	2	2
Type:	Navy Stockless	Navy Die-Lok
Weight/Length: ----	(Starboard - 2,050 lbs.	105 fathoms (each
Chain Size:	(Port - 1,775 lbs.	1-1/8 in.
Weight/Shot:		

	STERN ANCHOR	DEEP SEA CABLE
Quantity:	1	
Type:	Navy Stockless	
Weight:	950 lbs.	
Length:		
Size:		

	ANCHOR WINDLASS
Quantity:	1
Type:	Double-Winch Head, Horizontal Spur Gear
Manufacturer:	C. H. Wheeler Manufacturing Co.
Drive:	Electric (13,760 ft.-lbs. at 30 ft./min.)

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	3	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	2	1 Sunair 1 Collins	1 KW 1 KW

RADIO TELETYPE
CAPABILITY

MF SAR TRANSCEIVERS - is equipped with this.

EMERGENCY RADIOS:
PORTABLE TRANSCEIVER

RADIO AUTO ALARM
RECEIVER

VHF EMERGENCY CAPABILITY -- vessel is equipped.
[Emergency Position
Indicating Radiobeacon
(EPIRB)]

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A			
LORAN-C	2	1 Internav 1 Benmar	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT	1	Del Norte	
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	4	3 Raytheon 1 Ross	Raytheon 90 KHZ Raytheon 21 KHZ Ross 200 KHZ
DEEP WATER ECHO SOUNDER	2	1 Edo 1 Raytheon	12 KHZ 12 KHZ
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS (2 on launches)	3	Digital Equipment Co.	PDP8E
HYDROPLOT CONTROLLER	1	Houston Instruments	DP-3-5 Plotter
COMPLOT INCREMENTAL PLOTTER	Yes		

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: General Motors Corp.

REDUCTION GEAR

Quantity: 2
Manufacturer: Lufkin
Ratio: 2.35:1
Drive:
Rating:
Type: VQ 1814

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: KaMeWa
No. of Blades: 3
Diameter: 6 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 1
Type: Four-stage Flash
Manufacturer: Griscomb Russel
Max. Production: 1,800 gallons/day
Normal Production: 1,800 gallons/day
Normal Consumption: 1,800 gallons/day
Storage Capacity: 5,400 gallons

POLLUTION CONTROL

Type of Treatment: Aerobic Bacterial Digestion (FAST System)
Sewage Holding Tank Capacity: 30 days
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel (GM)/Delco	220 KW	225V/450V	450 VAC Three Phase 220 VAC Single Phase 120 VAC Single Phase
EMERGENCY GENERATOR	1	Detroit Diesel/Delco	60 KW	225VAC/ 450VAC	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	2	29'	Aluminum	Jensen	Diesel
UTILITY BOATS					
Motor Whale Boats	3	*(2) 16' (1) 13'	Fiberglass	Boston Whaler	Gasoline Outboard

* NOTE: One of the 16' Boston Whalers is designated and outfitted as a ready-rescue boat.



McARTHUR S330

LAUNCHED: November 15, 1965
 DELIVERED: November 9, 1966
 COMMISSIONED: December 15, 1966

DESIGNER: Maritime Administration
 BUILDER: Norfolk Shipbuilding &
 Drydock Corp.
 Norfolk, Virginia

CALL LETTERS: WTEJ

SISTER SHIPS: DAVIDSON

HOME PORT: Seattle, Washington

GROSS TONNAGE: 854
 NET TONNAGE: 207
 DISPLACEMENT: 995 tons
 HULL: Welded Steel
 ice strengthened
 LENGTH (LOA): 175.0 ft. (53.50 meters)
 BREADTH (Moulded): 38.0 ft. (11.59 meters)
 DRAFT, MAXIMUM: 11.5 ft. (3.51 meters)
 DRAFT, MEAN: 11.5 ft. (3.51 meters)

CRUISING SPEED: 12 knots
 RANGE: 5,900 nautical miles
 SHAFT HORSEPOWER: 1,600
 FUEL: #2 Diesel
 FUEL CAPACITY: 59,000 gallons
 FUEL CONSUMPTION: 120 gal./hr.

ENDURANCE: 21 days
 CONSTRAINT: Fuel

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

The McARTHUR is presently assigned to operations involving circulatory studies and is outfitted for these operations. Her original purpose and outfitting are for hydrographic survey operations.

Oceanographic Lab 150 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 8
 SHIP'S OFFICERS & CREW: 30
 SCIENTISTS: 2

BERTHING

ONE-BUNK STATEROOMS: 2
 TWO-BUNK STATEROOMS: 19
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 40

MESSING

WARDROOM MESS: 8 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS: 22 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS:
 MEDICINE CHEST: First Aid capacity
 only.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Northern Line Machine & Engineering Co.
Drive: Electro-Hydraulic
Line Pull Rate: 3,000 lbs.
Max. Pull Rate: 7 ft./sec.
Drum Capy - Min.: 30,000 ft., 3/16" dia. wire
- Max.: 11,000 ft., 5/16" dia. wire
Regulated Drum Speed: (interchangeable drum)

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
- Max.:
Regulated Drum Speed:

CRANES AND BOOMS

FORWARD CRANE

Quantity: 1
Manufacturer: Baldwin-UMA-Hamilton Corp.
Type: Telescoping Boom
Rotation: 360°
Radius - Max.: 32 ft.
- Min.: 15 ft.
Hoisting Capy -
Min. Radius: 5,700 lbs.
Max. Radius: 2,410 lbs.

AFT CRANE

1
Husky Hydraulics, Inc.
Articulated Boom
360°
22 ft.
8 ft.
12,500 lbs.
4,550 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

STERN A-FRAME

Quantity: Movable
Type:
Clearance: 4 ft. (over the side)
General Location:

GROUND TACKLE

ANCHORS

Quantity: 3
Type: Stockless
Weight/Length: 2,030 lbs. (each)
Chain Size:
Weight/Shot:
Length - Port:
Starboard:

ANCHOR CHAINS

2
HS Welded Stud
1-3/16"
1,275 lbs.
105 fathoms
165 fathoms

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Horizontal Shaft
Manufacturer:
Drive: Electric motor driven through a reversible,
2-speed controller.

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	3	Motorla	25 W
HF RADIOTELEPHONE TRANSCEIVERS	4	(1)Collins (1)CAI (2)Scientific Radio	1 KW 150 W 1 KW
RADIO TELETYPE CAPABILITY	Yes		
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2W
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeaçon (EPIRB)]	6	Narco Marine	75 mW

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A/C	1	Sperry	
LORAN-C	1	Sperry	
OMEGA			
RDF	1	RCA	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	4	Raytheon	21 KHz
DEEP WATER ECHO SOUNDER	1	Edo	12 KHz
NARROW BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
ACOUSTIC RELEASE	1	AMF	Model #200
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: **Geared Diesel**

	MAIN ENGINE	REDUCTION GEAR
Quantity:	2	2
Type:		
Manufacturer:	General Motors	Lufkin
Ratio:		2.6:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity:	2
Type:	Controllable Pitch
Manufacturer:	Byrd-Johnson
No. of Blades:	3
Diameter:	81-1/2"

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity:	1
Type:	
Manufacturer:	Aqua-Chem, Inc.
Max. Production:	3,000 gallons/day
Normal Production:	2,400 gallons/day
Normal Consumption:	1,200 gallons/day
Storage Capacity:	6,000 gallons

POLLUTION CONTROL

Type of Treatment: Comminutor/Chlorinator
Sewage Holding Tank Capacity: 5,000 gallons (4 days)
Oily Waste Holding Tank Capacity: 4,000 gallons

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/ General Electric	220 KW	450V	450 VAC Three Phase 110 VAC Single Phase 120 FAC Single Phase
EMERGENCY GENERATOR	1	Detroit Diesel/ General Electric	60 KW	450V	450 VAC Three Phase

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	4	(1)25'	Fiberglass	Bertram	Inboard Diesel
		(1)17'	Aluminum	Monark Boat Co.	Outboard Motor
		(1)16'	Fiberglass	Boston Whaler	Outboard Motor
		(1)26'	Fiberglass	U.S. Navy Surplus	Inboard Diesel



DAVIDSON S331

LAUNCHED: May 7, 1966
 DELIVERED: February 9, 1967
 COMMISSIONED: March 10, 1967

DESIGNER: Maritime Administration
 BUILDER: Norfolk Shipbuilding &
 Drydock Corp.
 Norfolk, VA

CALL LETTERS: WTEK

SISTER SHIPS: McARTHUR

HOME PORT: Seattle, Washington

GROSS TONNAGE: 854
 NET TONNAGE: 207
 DISPLACEMENT: 995 tons
 HULL: Welded Steel,
 strengthened for ice
 LENGTH (LOA): 175 ft. (53.0 meters)
 BREADTH (Moulded): 38 ft. (11.5 meters)
 DRAFT, MAXIMUM: 12 ft. (3.7 meters)
 DRAFT, MEAN: 11 ft. (3.4 meters)

CRUISING SPEED: 12 knots
 RANGE: 6,400 nautical miles
 SHAFT HORSEPOWER: 1,600
 FUEL: #2 Diesel
 FUEL CAPACITY: 44,670 gallons
 FUEL CONSUMPTION: 102 gal./hr.
 (at cruising speed)
 ENDURANCE: 21 days
 CONSTRAINT: Fuel

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Designed and outfitted for hydrographic surveys involving nautical charting, scientific equipment normally onboard is limited to that equipment which normally supports and is related to these survey operations.

Oceanographic Lab 150 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 8
 SHIP'S OFFICERS & CREW: 31
 SCIENTISTS: 3

BERTHING

ONE-BUNK STATEROOMS: 2
 TWO-BUNK STATEROOMS: 19
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 40

MESSING

WARDROOM MESS: 8 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS: 22 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid capability
 only.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Northern Line Machine & Engineering Co.
Drive: Electro-Hydraulic
Line Pull Rate: 3,000 lbs.
Max. Pull Rate: 6.7 ft./sec.
Drum Capy - Min.: 12,000 ft., .298" dia. wire (interchangeable drum)
- Max.:
Regulated Drum Speed:

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
- Max.:
Regulated Drum Speed:

CRANES AND BOOMS

FORWARD CRANE

Quantity: 1
Manufacturer: Baldwin-UMA-Hamilton Corp.
Type: Telescoping Boom
Rotation: 360°
Radius - Max.: 30 ft.
- Min.: 17 ft.
Hoisting Capy -
Min. Radius: 5,400 lbs.
Max. Radius: 3,000 lbs.

AFT CRANE

1
Husky Hydraulics, Inc.
Articulated Boom
360°
22 ft.
8 ft.
12,500 lbs.
4,550 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

STERN A-FRAME

Quantity: 1
Type: Movable
Clearance: 4 ft. (over the side)
General Location:

Working Load:

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	3	2
Type:	Stockless	HS Welded Stud
Weight/Length:	2,030 lbs. (each)	
Chain Size:		1-3/16"
Weight/Shot:		1,275 lbs.
Length - Port:		105 fathoms
Starboard:		165 fathoms

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Horizontal Shaft
Manufacturer:
Drive: Electric motor driven through a reversible, 2-speed controller.

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	6	(1) Collins (1) CAI (2) Scientific Radio (2) RF Communications	1 KW 150 W
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	4	Narco Marine	75 mW

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A/C	1	Sperry	
LORAN-C	1	Internav	
OMEGA			
RDF	1	RCA	
LINE OF SIGHT POSITIONING EQUIPMENT	3	Motorola	
MEDIUM RANGE POSITIONING EQUIPMENT	3	Raydist	
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	5	(3) Ross (2) Raytheon	100 KHz 21 KHz
DEEP WATER ECHO SOUNDER	1	Edo	12 KHz
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER: SIDE SCAN SONAR	1	Westmor	
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	3	Digital Equipment Co.	PDP8E
HYDROPLOT CONTROLLER		Digital Equipment Co.	
COMPLIT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

	MAIN ENGINE	REDUCTION GEAR
Quantity:	2	2
Type:		Lufkin
Manufacturer:	General Motors	
Ratio:		2.6:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity:	2
Type:	Controllable Pitch
Manufacturer:	Byrd-Johnson
No. of Blades:	3
Diameter:	81-1/2"

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity:	1
Type:	
Manufacturer:	Adqua-Chem, Inc.
Max. Production:	2,500 gallons/day
Normal Production:	2,000 gallons/day
Normal Consumption:	2,000 gallons/day
Storage Capacity:	5,970 gallons

POLLUTION CONTROL

Type of Treatment: Comminutor/Chlorinator
Sewage Holding Tank Capacity: 5,000 gallons (4 days)
Oily Waste Holding Tank Capacity: 4,000 gallons

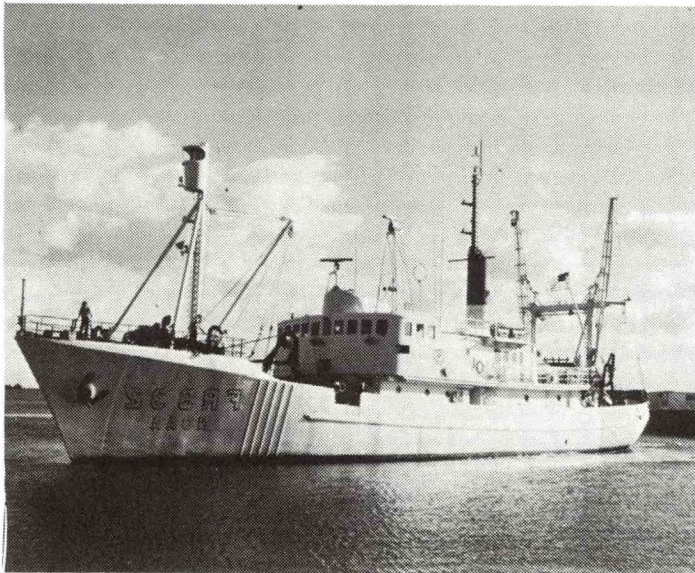
ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/ General Electric	220 KW	450 V	450 VAC Three Phase
EMERGENCY GENERATOR	1	Detroit Diesel/ General Electric	60 KW	450 V	450 V. ; Three Phase

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES	2	29'	Aluminum	Jensen	Diesel
UTILITY BOATS	1	16'	Fiberglass	Boston Whaler	Outboard Motor
	2	17'	Aluminum	Monark	Outboard Motor
	2	29'	Aluminum	Jensen	Diesel

OREGON II R332



LAUNCHED:
DELIVERED: 1967
COMMISSIONED:

DESIGNER: Robert H. Macy
BUILDER: Ingalls Shipbuilding

CALL LETTERS: WTDO

SISTER SHIPS:

HOME PORT: Pascagoula, Mississippi

GROSS TONNAGE: 703
NET TONNAGE: 228
DISPLACEMENT: 906 tons
HULL: Welded Steel,
Aluminum Superstructure
LENGTH (LOA): 170'0" (52.0 meters)
BREADTH (Moulded): 34'0" (10.0 meters)
DRAFT, MAXIMUM: 15'0" (4.6 meters)
DRAFT, MEAN: 12'6" (3.8 meters)

CRUISING SPEED: 12 knots
RANGE: 10,700 nautical miles
SHAFT HORSEPOWER: 1,600 horsepower
FUEL: #2 Diesel
FUEL CAPACITY: 80,900 gallons
FUEL CONSUMPTION: 85 gallons/hour
(at cruising speed)
ENDURANCE: 60 days operation
CONSTRAINT: 30 days fuel

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Fisheries research.

Specimen Lab 100 sq.ft.
Live Specimen Lab 75 sq.ft.
Instrumentation Lab 75 sq.ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS: 6
SHIP'S OFFICERS & CREW: 10
SCIENTISTS: 13

BERTHING

ONE-BUNK STATEROOMS: 3
TWO-BUNK STATEROOMS: 11
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS: 1
FIVE-BUNK STATEROOMS:
TOTAL BUNKS: 29

MESSING

WARDROOM MESS:
SHIP'S OFFICERS' MESS:
TECHNICIANS'S MESS:
CREW MESS: 12 people/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 0
MEDICINE CHEST: First Aid Equipment
and some controlled drugs.

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

	TRAWL WINCHES	COMBINATION SEINE/TRAWL WINCH
Quantity:	2	1
Manufacturer:	Marco	Marco
Drive:	Hydraulic	Hydraulic
Line Pull:	42,000 lbs.	30,000 lbs.
Maximum Pull Rate:	105 ft./min.	68 ft./min.
Drum Copy:	7,500' of 7/8" wire	1,200' of 9/16" wire

	HYDROGRAPHIC WINCH	B.T. WINCH
Quantity:	1	1
Manufacturer:	New Eng. Trawler Equip.	Tsurumi-Seikiosaku-Sho Co., Ltd.
Drive:	Hydraulic	Electric
Line Pull Rate:	3,700 lbs.	2.6 meters/sec.
Maximum Pull Rate:	190 ft./min.	1,000' of 3mm dia. wire
Drum Copy:	28,000' of 1/4" wire	

CRANES AND BOOMS

	FORWARD BOOM	AFT BOOM
Quantity:	1	1
Manufacturer:		
Type:		
Rotation:		
Radius - Max.:	32'	25'
Min.:		
Hoisting Copy:	6,000 lbs.	6,000 lbs.

	FISHING BOOM AFT
Quantity:	1
Manufacturer:	
Type:	
Rotation:	
Radius - Max.:	17'
Min.:	
Hoisting Copy:	3,000 lbs.

A-FRAMES

Quantity:		
Type:	Movable	Fixed
Clearance:	6' (over the side)	
General Location:	Upper deck, midship, port side	Main deck, forward, starboard side
Working Load:	6,000 lbs.	78,000 lbs.

GROUND TACKLE

	ANCHORS	ANCHOR CHAINS
Quantity:	3	2
Type:	Navy Stockless	Stud Link
Weight/Length:	2,275 lbs. (each)	105 fathoms
Chain Size:		1-1/4"
Weight/Shot:		

	DEEP SEA ANCHOR	DEEP SEA CABLE
Quantity:		
Type:		
Weight:		
Length:		
Size:		

	ANCHOR WINDLASS
Quantity:	1
Type:	Independent Gypsy Head/2 Wildcats
Manufacturer:	Ideal Windlass Company
Drive:	Electric

ELECTRONICS

COMMUNICATIONS

<u>Category</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE-TO-BRIDGE TRANSCEIVERS	2	Intech Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	1	Scientific Radio	150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY -- vessel is equipped. [Emergency Position Indicating Radiobeacon (EPIRB)]			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A			
LORAN-C	2	ENAC	
OMEGA	1	ITT	
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	1	Simrad	ES-2A
DEEP WATER ECHO SOUNDER			
NARROW BEAM ECHO SOUNDER			
FISH FINDER	2	ELAC Simrad	ADT3 ET38
STEERABLE SONAR	1	ELAC	LA240
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPLIT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Fairbanks Morse

REDUCTION GEAR

Quantity: 1
Manufacturer: Lufkin Foundry
Ratio: 5.07:1

PROPELLERS

Quantity: 1
Type: Controllable Pitch
Manufacturer: KaMeWa
No. of Blades: 4
Diameter: 7-1/2 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type: H-J-20
Manufacturer: American Machine & Foundry
Max. Production: 960 gallons/day
Normal Production: 800 gallons/day
Normal Consumption: 1,000 gallons/day
Storage Capacity: 8,000 gallons

POLLUTION CONTROL

Type of Treatment: Comminutor-Chlorinator
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity:

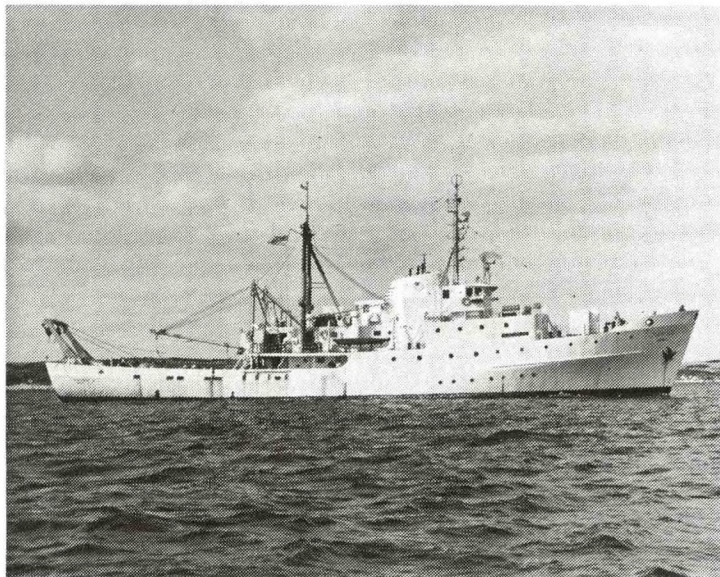
ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Fairbanks Morse	60 KW	440 VAC	440 VAC Three Phase 120 VAC Single Phase
EMERGENCY GENERATOR					

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					
Rescue Boat	1	12'	Fiberglass	Seapip	Gasoline Outboard

ALBATROSS IV R342



LAUNCHED:
 DELIVERED: May 1962
 COMMISSIONED:

DESIGNER: Dwight S. Simpson Asso.
 BUILDER: Southern Shipbuilding
 Slidell, Louisiana

CALL LETTERS: WMVF

SISTER SHIPS:

HOME PORT: Woods Hole, Massachusetts

GROSS TONNAGE: 939
 NET TONNAGE:
 DISPLACEMENT: 1,089 tons
 HULL: Welded Steel, Ice
 LENGTH (LOA): 187'0" (57.0 meters)
 BREADTH (Moulded): 33'0" (10.0 meters)
 DRAFT, MAXIMUM: 16'0" (4.9 meters)
 DRAFT, MEAN: 13'9" (4.2 meters)

CRUISING SPEED: 12 Knots
 RANGE: 9,000 Nautical Miles
 SHAFT HORSEPOWER: 1,130 Horsepower
 FUEL: #1 Diesel
 FUEL CAPACITY: 45,500 Gallons
 FUEL CONSUMPTION: 63 gallons/hour

ENDURANCE: 15 days

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Fisheries research.

Dry Oceanographic Lab	156 sq.ft.
Wet Oceanographic Lab	125 sq.ft.
Biological Lab	350 sq.ft.
Plankton Lab	120 sq.ft.
Photographic Lab	30 sq.ft.
Scientific Office	113 sq.ft.
Electronics Lab	412 sq.ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS:	7
CREW:	15
SCIENTISTS:	15

BERTHING

ONE-BUNK STATEROOMS:	9
TWO-BUNK STATEROOMS:	7
THREE-BUNK STATEROOMS:	5
FOUR-BUNK STATEROOMS:	
FIVE-BUNK STATEROOMS:	
TOTAL BUNKS:	38

MESSING

WARDROOM MESS:	
SHIP'S OFFICERS' MESS:	14 persons/seating
TECHNICIANS'S MESS:	
CREW MESS:	8 persons/seating

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS:	-0-
MEDICINE CHEST:	First Aid equipment and some controlled drugs

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

	DREDGE WINCH	TRAWL WINCH
Quantity:	2	1
Manufacturer:	New England Trawler	New England Trawler
Drive:	Electric	Electric
Line Pull Rate:	4,000 lbs. (1 of 2 winches has 2,100 lbs. for constant tension mode)	16,00 lbs.
Max. Pull Rate:	220 ft./min.	215 ft./min.
Drum Copy:	3,900 ft. of 5/8-in. cable	6,000 ft. of 7/8-in. cable
	HYDROGRAPHIC WINCH	BOTTOM GRAB/NEUSTON WINCH
Quantity:	2	1
Manufacturer:	New England Trawler	New England Trawler
Drive:	Electric	Electrohydraulic
Line Pull Rate:	3,800 lbs.	3,500 lbs.
Max. Pull Rate:	250 ft./min.	200 ft./min.
Drum Copy:	20,000 ft. of 1/4-in. wire	6,000 ft. of 3/8-in. wire

CRANES AND BOOMS

	UTILITY BOOM	UTILITY BOOM
Quantity:	1	2
Manufacturer:	Marco (hoist winch)	
Type:	Articulated Boom	Cargo Booms
Rotation:		
Radius - Max.:		
- Min.:		
Hoisting Copy:	10,000 lbs.	2,000 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Copy:

A-FRAMES

	A-FRAMES	GANTRY	BOTTOM GRAB/NEUSTON TOW
Quantity:	1	1	1
Type:	Movable	Movable	Movable
Clearance:			
General Location:	Starboard, Main Deck, Aft	Stern	Trawl Deck, Starboard Side
Working Load:	4,000 lbs.	10,000 lbs. - 2 -	5,000 lbs.

GROUND TACKLE

	ANCHORS	ANCHOR CHAIN
Quantity:	3	2
Type:	Bower	Die Lock
Weight/Length:	(2)2,000 lbs.; (1)1,500 lb.	100 fathoms
Chain Size:		1/4 in.
Weight/Shot:		

DEEP SEA ANCHOR

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Spur Gear
Manufacturer: Hyde Windlass Co.
Drive: Electric

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	(1) Motorola (1) Intech	25 W
HF RADIOTELEPHONE TRANSCEIVERS	2	RF Communications	150 W/1 KW
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2 W
RADIO AUTO ALARM RECEIVER		RCA	
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]			
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1	Decca	
SATNAV			
LORAN-A		ENAC	
LORAN-C	2	InterNav	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1		
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER	2	Edo/Raytheon	12 Khz
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPLIT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Caterpillar
Ratio:

REDUCTION GEAR

Quantity: 1
Manufacturer: Lufkin
Ratio: 4.8:1
Drive:
Rating:

PROPELLER

Quantity: 1
Type: Controllable Pitch
Manufacturer:
No. of Blades: 3
Diameter: 6'

BOW THRUSTER

Type: Thru Hull
Drive: Diesel Electric
Manufacturer:
Rating: 125 horsepower
Drive Train: Murry & Trecurtha, Inc. (Tunnel)

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type: Heat Recovery
Manufacturer: AFM Maxium
Max. Production: 1,600 gallons/day
Normal Production: 1,100 gallons/day
Normal Consumption: 1,100 gallons/day
Storage Capacity: 21,768 gallons

POLLUTION CONTROL

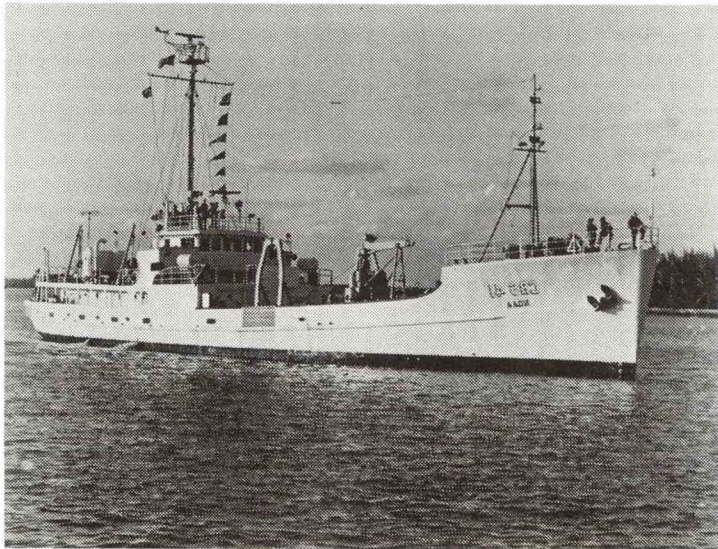
Type of Treatment:
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Caterpillar/ Westinghouse	150 KW	240/ 120 VDC	240 VDC 120 VDC 120 FAC Single Phase
EMERGENCY GENERATOR					
AUXILLIARY GENERATOR	1		150 KW		440 VAC Three Phase

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					



KELEZ R441

LAUNCHED: 1944 (Army FS-400)
 CONVERTED: 1964 (BCF), 1975 (NOAA)
 COMMISSIONED: March 14, 1975 (NOAA)

DESIGNER:
 BUILDER: Ingalls
 Decatur, Alabama

CALL LETTERS: KNBG

SISTER SHIPS:

HOME PORT: Norfolk, Virginia

GROSS TONNAGE: 550
 NET TONNAGE: 262
 DISPLACEMENT: 936 tons
 HULL: Welded Steel

LENGTH (LOA): 176.5 ft. (53.8 meters)
 BREADTH (Moulded): 32.0 ft. (9.8 meters)
 DRAFT, MAXIMUM: 12.0 ft. (3.6 meters)
 DRAFT, MEAN: 10.0 ft. (3.1 meters)

CRUISING SPEED: 10.5 knots
 RANGE: 5,000 nautical miles
 SHAFT HORSEPOWER: 900
 FUEL: #2 Diesel
 FUEL CAPACITY: 26,000 gallons
 FUEL CONSUMPTION: 1,450 gal./day

ENDURANCE: 17 days (fuel)
 10 days (water)
 Normal Potable

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Coastal and offshore oceanography; fisheries research.

Dry Oceanographic Lab 32 sq.ft.
 Wet Oceanographic Lab 80 sq.ft.

Hold down pad-eyes and electrical outlets available for portable scientific vans at four open deck locations.

Scientific Chill Box 42°F (4.5°C) 500 cu.ft.
 Scientific Freezer -10°F (-2.3°C) 24 cu.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 7
 SHIP'S OFFICERS & CREW: 18
 SCIENTISTS: 5

BERTHING

ONE-BUNK STATEROOMS: 4
 TWO-BUNK STATEROOMS: 12
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS: 1
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 32

MESSING

MESS ROOM, COMMON 18 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 0
 MEDICINE CHEST: Limited First Aid
 with some controlled drugs.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

	OCEANOGRAPHIC WINCH	TRAWL WINCH
Quantity:	1	1
Manufacturer:	Rowe	Marco
Drive:	Hydraulic	Hydraulic
Line Pull Rate:	10,000 statis	10,000 lbs.
Max. Pull Rate:	100 m/min.	3,000 ft. of 9/16" cable
Drum Capy:	6,000 m. of 7/16" wire	233 ft./min.

	STD WINCH
Quantity:	1
Manufacturer:	Hydrohoist
Drive:	Hydraulic
Line Pull Rate:	500 lbs.
Max. Pull Rate:	10 m./min.
Drum Capy:	2,000 ft. of 3/16" cable

CRANES AND BOOMS

	STORES/OCEANOGRAPHIC CRANE	AUXILLIARY CRANE
Quantity:	1	1
Manufacturer:	Rowe	Daybrook
Type:	Telescoping Boom	Articulating
Rotation:	360°	180° (limited by superstructure)
Radius - Max.:	28 ft.	10 ft.
- Min.:	6 ft.	4 ft.
Hoisting Capy:	1,750 lbs. @ 28 ft.	800 lbs. @ 10 ft.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy:

A-FRAMES

	WELL DECK, PORT AND STARBOARD
Quantity:	1 per side
Type:	Movable
Clearance:	6 ft. (over the side)
General Location:	

GROUND TACKLE

ANCHORS

Quantity: 3 (1 spare)
Type: Navy Stockless
Weight/Length: 1,500 lbs. (each)
Chain Size:
Weight/Shot:

ANCHOR CHAINS

2
Cast Steel
105 fathoms (each)

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Capstan Windlass, horizontal shaft
Manufacturer: Superior Iron Works
Drive: 20 horsepower electric motor through
worm gear (variable speed)

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
MF/HF RADIOTELEPHONE TRANSCEIVERS (incl. SAR freq)	2	RF Communications	100 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER (MF) (distress)	Yes.		
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	Yes.		
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A /C	1	Decca	
LORAN-C	2	Internav	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)			
OTHER: FATHOMETER: SHALLOW WATER DEEP WATER			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	1	Ross	100 KHz
DEEP WATER ECHO SOUNDER	1	Edo	12 KHz
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

	MAIN ENGINES	REDUCTION GEAR
Quantity:	2	2
Type:	Diesel	
Manufacturer:	General Motors	Falk

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity: 2
Type: Fixed Pitch
Manufacturer:
No. of Blades: 3
Diameter: 6 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

NO EVAPORATORS

Quantity:
Type: Storage Tanks
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption: 12,000 gallons/day
Storage Capacity: 24,000 gallons/day

POLLUTION CONTROL

Type of Treatment: None
Sewage Holding Tank Capacity: 3,000 gal. (2 days -- full complement)
Oily Waste Holding Tank Capacity: Bilge holding only.

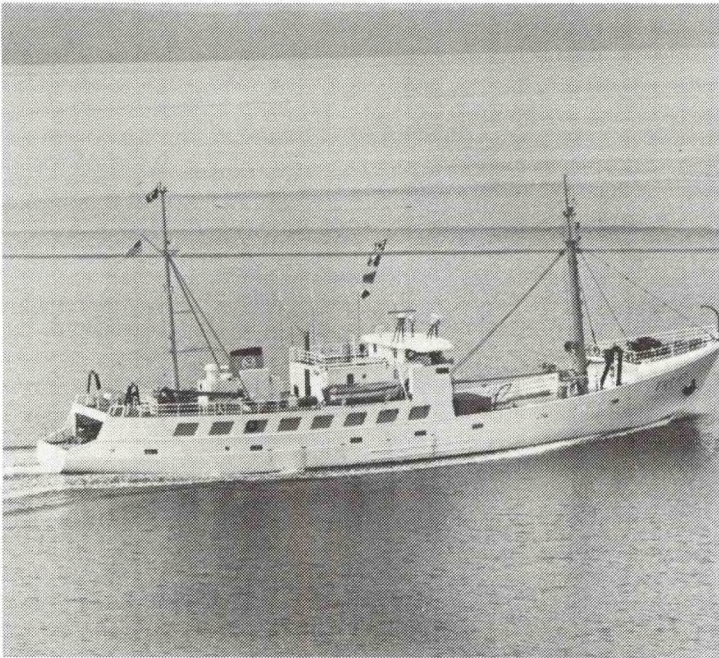
ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS					
DC	2	Cleveland/ Allis Chalmers	75 KW	230 V	
AC	2	(1) Detroit Diesel/ Delco	150 KW	208/110 V	
		(1) General Motors/ Delco	60 KW	208/110 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
Dive Boats (Cap: 5 persons)	1	13'	Inflatable	Zodiac	Outboard Motor
UTILITY BOATS	1	19'	Aluminum	Monark	Outboard Motor

TOWNSEND CROMWELL R443



GROSS TONNAGE: 564
 NET TONNAGE: 384
 DISPLACEMENT: 652 tons
 HULL: Welded Steel

LENGTH (LOA): 163.0 ft. (48.0 meters)
 BREADTH (Moulded): 33.0 ft. (10.0 meters)
 DRAFT, MAXIMUM: 12.0 ft. (3.5 meters)
 DRAFT, MEAN: 9.0 ft. (2.7 meters)

CRUISING SPEED: 11.5 knots
 RANGE: 9,000 nautical miles
 SHAFT HORSEPOWER: 800
 FUEL: #2 Diesel
 FUEL CAPACITY: 42,000 gallons
 FUEL CONSUMPTION: 50 gallons/hour
 (at cruising speed)

ENDURANCE: 33 days
 CONSTRAINT: Fuel

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

The TOWNSEND CROMWELL is designed and outfitted for fisheries research involving trawling, longlining, gill-netting, oceanography, and biological research. Scientific equipment normally on board is limited to that equipment which supports and is related to these operations.

Oceanographic Lab 290 sq.ft.

LAUNCHED:
 DELIVERED: 1963
 COMMISSIONED: 1975

DESIGNER: W. C. Nickum & Sons
 BUILDER: J. Ray McDermott Co.
 Amelia, Louisiana

CALL LETTERS: WTDF

SISTER SHIPS:

HOME PORT: Honolulu, Hawaii

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 4
 SHIP'S OFFICERS & CREW: 13
 SCIENTISTS: 9

BERTHING

ONE-BUNK STATEROOMS: 4
 TWO-BUNK STATEROOMS: 11
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 26

MESSING

GENERAL MESS: 22 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid capability, only.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

TRAWL WINCHES

Quantity:	1	1
Manufacturer:	New England Trawler	Markey
Drive:	Electric	Hydraulic
Line Pull Rate:	14,000 ft.-lbs.	2,750 ft.-lbs.
Max. Pull Rate:	1.5 ft./sec.	4 ft./sec.
Drum Copy:	6,000 ft., 1/2" dia. wire	30,000 ft., 3/16" dia. wire

Quantity:	2
Manufacturer:	Rowe Machine
Drive:	Hydraulic
Line Pull Rate:	
Max. Pull Rate:	
Drum Copy:	3,600 ft., 5/8" dia. wire

CRANES AND BOOMS

CRANE #1

Quantity:	1
Manufacturer:	Husky Mariner
Type:	Articulated Boom
Rotation:	360°
Radius - Max.:	25 ft.
- Min.:	6 ft.
Hoisting Copy:	2,000 lbs.

CRANE #2

Quantity:	1
Manufacturer:	Rowe Machine
Type:	Non-telescoping Boom
Rotation:	120°
Radius - Max.:	30 ft.
- Min.:	10 ft.
Hoisting Copy:	10,000 lbs.

Quantity:	
Manufacturer:	
Type:	
Rotation:	
Radius - Max.:	
- Min.:	
Hoisting Copy:	

A-FRAMES

Quantity:	
Type:	Fixed Gallows
Clearance:	2 ft. (over the side)
General Location:	

GROUND TACKLE

ANCHORS

Quantity: 1
Type: Stockless
Weight/Length: 1,365 lbs.
Chain Size:
Weight/Shot:

ANCHOR CHAIN

1
Wrought Iron Stud Link
105 fathoms
1-1/8"
1,140 lbs.

DEEP SEA ANCHOR

Quantity: 1
Type:
Weight: 500 lbs.
Length:
Size:
Manufacturer: Danforth

DEEP SEA ANCHOR CABLE

1
3/4", 6x19 Pow Steel Wire Rope
1,200 ft.

ANCHOR WINDLASS

Quantity: 1
Type: Horizontal Shaft
Manufacturer: Markey
Drive: Electric

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	3	(2) Sunair (1) CAI	
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	4	Narco Marine	75 mW

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A/C	2	Benmar	
LORAN-C			
OMEGA	1	Navidyne	
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)			
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	Raytheon	21 KHz
DEEP WATER ECHO SOUNDER	1	Edo	12 KHz
NARROW BEAM ECHO SOUNDER			
FISH FINDER	2	(1) Simrad (1) Furuno	
STEERABLE SONAR	1	Strazo	
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Superior-White

REDUCTION GEAR

Quantity: 2
Manufacturer: Lufkin
Ratio: 2.2:1
Drive:
Rating:

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: Liaaen Shipbuilding
No. of Blades: 3
Diameter: 5.5 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type:
Manufacturer: Triton
Max. Production: 1,800 gallons/day
Normal Production: 750 gallons/day
Normal Consumption: 750 gallons/day
Storage Capacity: 13,000 gallons

POLLUTION CONTROL

Type of Treatment: Macerator/Chlorinator
Sewage Holding Tank Capacity: 200 gallons
Oily Waste Holding Tank Capacity: Limited to bilge holding

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Caterpillar	175 KW	450V	120 VAC Single Phase 220 VAC Three Phase 450 VAC Three Phase
EMERGENCY GENERATOR	1	Onan	6 KW		120 V Three Phase

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	2	(1) 16'	FRP	Boston Whaler	Outboard Motor
		(1) 12'	Rubber	Zodiac	Outboard Motor

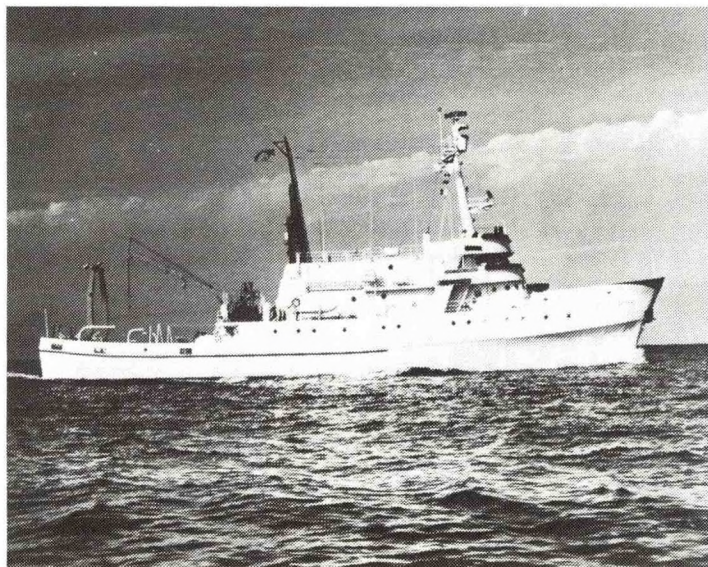
LAUNCHED:
 DELIVERED: November 1965
 COMMISSIONED:

DESIGNER: Harco Engineering, Division
 of Harbor Boat Building Co.
 BUILDER: Christy Corp.
 Sturgeon Bay, Wisconsin

CALL LETTERS: WTDK

SISTER SHIPS:

HOME PORT: San Diego, California



GROSS TONNAGE: 873
 NET TONNAGE: 714
 DISPLACEMENT: 890 tons
 HULL: Welded Steel

LENGTH (LOA): 171'0" (52.0 meters)
 BREADTH (Moulded): 36'8" (11.0 meters)
 DRAFT, MAXIMUM: 14'0" (4.3 meters)
 DRAFT, MEAN: 11'4" (3.4 meters)

CRUISING SPEED: 11.5 knots
 RANGE: 7,700 nautical miles
 SHAFT HORSEPOWER: 1,068
 FUEL: #2 Diesel
 FUEL CAPACITY: 54,200
 FUEL CONSUMPTION: 58 gallons/hour

ENDURANCE: 29 days
 CONSTRAINT: Fuel

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

Fisheries research.

Chemical Oceanographic Lab	370 sq.ft.
Physical Oceanographic Lab	210 sq.ft.
Biological Oceanographic Lab	53 sq.ft.
X-Ray Room	55 sq.ft.
Dark Room	40 sq.ft.
Constant Temperature Room	76 sq.ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS: 6
 SHIP'S OFFICERS & CREW: 9
 SCIENTISTS: 13

BERTHING

ONE-BUNK STATEROOMS: 3
 TWO-BUNK STATEROOMS: 16
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 35

MESSING

SHIP'S MESS (GENERAL): 27 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid capability, only.

ADMINISTRATOR: Ship's Officers

DECK MACHINERY

WINCHES

HYDROGRAPHIC WINCHES

Quantity:	1	1
Manufacturer:	Marco	Marco
Drive:	Hydraulic	Hydraulic
Line Pull Rate:	1,600 ft.-lbs.	1,600 ft.-lbs.
Max. Pull Rate:	780 ft./min.	780 ft./min.
Drum Capy:	15,000 ft., 5/16" dia. wire	30,000 ft., 5/16" dia. wire

DEEP SEA CORING WINCH

Quantity:	1
Manufacturer:	Marco
Drive:	Hydraulic
Line Pull Rate:	6,500 lbs.
Max. Pull Rate:	159 ft./min.
Drum Capy:	6,078 ft., 3/8" cable

CRANES AND BOOMS

CRANE #1

Quantity:	1
Manufacturer:	Buycrus Erie
Type:	Articulating, telescoping boom
Rotation:	
Radius - Max.:	
- Min.:	
Hoisting Capy -	
Min. Radius:	
Max. Radius:	

CRANE #2

Quantity:	1
Manufacturer:	Huskey Hydraulics, Inc.
Type:	Articulating boom
Rotation:	
Radius - Max.:	18 ft.
- Min.:	8 ft.
Hoisting Capy -	
Min. Radius:	4,650 lbs.
Max. Radius:	1,800 lbs.

Quantity:	
Manufacturer:	
Type:	
Rotation:	
Radius - Max.:	
- Min.:	
Hoisting Capy:	

A-FRAMES

STERN A-FRAME

Quantity:	1
Type:	Movable
Clearance:	
General Location:	
Capy:	10,000 lbs.
Working Load:	

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Stockless
Weight/Length: 1,940 lbs. (each)
Chain Size:
Weight/Shot:

ANCHOR CHAINS

2
Di-Lok Stud Link
105 fathoms
1-3/16"
1,563 lbs.

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type:
Manufacturer: Marco
Drive: Electro-Hydraulic
Line Pull: 23,000 lbs.
Retrieval Rate: 30 ft./min.

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	(1) Motorola (1) Intech	25 W 25 W
HF RADIOTELEPHONE TRANSCEIVERS	4	(3) ITT (1) Viking	1 KW 150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	ITT	2 W
RADIO AUTO ALARM RECEIVER	1	ITT	
VHF EMERGENCY CAPABILITY - vessel is equipped. [Emergency Position Indicating Radiobeacon (EPIRB)]			

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1	Decca	
SATNAV			
LORAN-A /C	1	ENAC	
LORAN-C	1	North Star	
OMEGA	1	Tracor	
RDF	1	Frontier	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER	2	Edo	12 KHZ
NARROW BEAM ECHO SOUNDER			
FISH FINDER	1	Simrad	
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

	MAIN ENGINES	REDUCTION GEAR
Quantity:	2	2
Type:	Diesel	Lufkin
Manufacturer:	White Superior	
Ratio:		2.684:1

BOW THRUSTER

Quantity: 1
Manufacturer: Schottle
Ratio:
Drive: Electric
Rating: 200 horsepower

PROPELLERS

Quantity: 2
Type: Controllable Pitch
Manufacturer: Byrd-Johnson (KaMeWa)
No. of Blades: 3
Diameter: 5.742 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 2
Type:
Manufacturer: Cuno Engineering Corp.
Max. Production:
Normal Production: 2,280 gallons/day
Normal Consumption: 1,000 gallons/day
Storage Capacity: 8,000 gallons

POLLUTION CONTROL

Type of Treatment:
Sewage Holding Tank Capacity: 700 gallons (21 hours)
Oily Waste Holding Tank Capacity: Bilge retention capability

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	General Motors/ Delco	200 KW, 250 KVA	450 VAC	115 VAC Three Phase 200 VAC Three Phase 450 VAC Three Phase
EMERGENCY GENERATOR	1	General Motors/ Delco	30 KW, 37.5 KVA	450 VAC	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	2	(1) 16'	Fiberglass	Boston Whaler	
		(1) 12'	Fiberglass	Boston Whaler	



DELAWARE II R445

LAUNCHED:
 DELIVERED: October 1968
 COMMISSIONED:

DESIGNER: George G. Sharp, Inc., NYC, NY
 BUILDER: South Portland Engineering Co.
 South Portland, Maine

CALL LETTERS: WZ2035

SISTER SHIPS:

HOME PORT: Sandy Hook, New Jersey

GROSS TONNAGE: 483
 NET TONNAGE: 231
 DISPLACEMENT: 680 tons
 HULL: Welded Steel

LENGTH (LOA): 155.00 ft. (47.2 meters)
 BREADTH (Moulded): 30.10 ft. (9.1 meters)
 DRAFT, MAXIMUM: 17.40 ft. (5.3 meters)
 DRAFT, MEAN: 11.75 ft. (3.6 meters)

CRUISING SPEED: 11.50 knots
 RANGE: 7,824.60 nautical miles
 SHAFT HORSEPOWER: 1,230
 FUEL: #2 Diesel
 FUEL CAPACITY: 40,824 gallons
 FUEL CONSUMPTION: 60 gal./hr.
 (at cruising speed)

ENDURANCE: 28 days
 CONSTRAINT: Water

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

Fisheries research.
 Wet Oceanographic Lab 250 sq.ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS: 6
 SHIP'S OFFICERS & CREW: 9
 SCIENTISTS: 9

BERTHING

ONE-BUNK STATEROOMS: 2
 TWO-BUNK STATEROOMS: 8
 THREE-BUNK STATEROOMS: 2
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 24

MESSING

COMMON MESSING AREA: 18 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: Limited First Aid capability.
 No. controlled drugs.

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Hathaway Machinery Co.
Drive: Hydraulic
Line Pull: 4,000 lbs.
Max. Pull Rate:
Drum Capy:

TRAWL WINCH

2
Marine Engines Specialties Co.
Hydraulic
20,000 lbs.
118.6 ft./min.
12,000 ft. - 3/4" dia. wire

BATHYTHERMOGRAPH WINCHES

Quantity: 2
Manufacturer: American Chain & Cable Co.
Drive: Electric
Line Pull Rate: 400 ft.-lbs.
Max. Pull Rate: 200 ft./min.
Drum Capy: 3,000 ft. - 3/32" dia. wire

CRANES AND BOOMS

FORWARD KINGPOST ASSEMBLY

Quantity: 1 Boom
Manufacturer:
Type: Non-Telescoping
Rotation: 180°
Radius: 45 ft.
Hoisting Capy: 10,000 lbs.

AFT KINGPOST ASSEMBLY

1 Boom
Non-Telescoping
180°
23 ft.
2,000 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

OCEANOGRAPHIC A-FRAME

Quantity: 1
Type: Movable
Clearance: 4 ft. (over the side)
General Location:

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Stockless
Weight/Length: 1,140 lbs. (each)
Chain Size:
Weight/Shot:

ANCHOR CHAIN

1
HS welded stud
135 fathoms
1-1/16 in.
1,020 lbs.

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Capstan Windlass (vertical shaft)
Manufacturer: Mesco
Drive: Electric/Hydraulic

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Intech Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS	2	RF Communications	
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]			
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A			
LORAN-C	2	InterNav	LC-101
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1 4	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	1	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER			
NARRO BEAM ECHO SOUNDER			
FISH FINDER	1	Simrad	Model EH3A
FISH SONAR	1	Simrad	Model SK3
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPLIT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINE

Quantity: 1
Type: Diesel
Manufacturer: E.M.D. General Motors Corp.
Ratio:

REDUCTION GEAR

1
Lufkin Marine Gear
3.22:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLER

Quantity: 1
Type: Fixed Pitch
Manufacturer:
No. of Blades: 4
Diameter: 96 inches

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATORS

Quantity: 1
Type:
Manufacturer: Maxim Aquafresh
Max. Production: 2,400 gallons/day
Normal Production: 1,800 gallons/day
Normal Consumption: 600 gallons/day
Storage Capacity: 7,300 gallons

POLLUTION CONTROL

Type of Treatment: Macerator/Chlorinator
Sewage Holding Tank Capacity: 250 gallons
Dirty Waste Holding Tank Capacity: Retention capability limited to bilges.

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	General Motors/ Delco	150 KW (187.5 KVa)	440 V	440 VAC Three Phase 220 VAC Three Phase 110 VAC Three Phase
EMERGENCY GENERATOR	1	Hercules/Cato	10 KW	440 V	

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					



FERREL S492
 LAUNCHED: April 4, 1968
 DELIVERED: May 14, 1968
 COMMISSIONED: June 4, 1968

DESIGNER: Zigler Shipyards, Inc.
 BUILDER: Zigler Shipyards, Inc.
 Jennings, Louisiana

CALL LETTERS: WTEZ

SISTER SHIPS:

HOME PORT: Norfolk, Virginia

GROSS TONNAGE: 349
 NET TONNAGE: 86
 DISPLACEMENT: 360 tons
 HULL: Welded Steel

 LENGTH (LOA): 133 ft. (40.53 meters)
 BREADTH (Moulded): 32 ft. (9.75 meters)
 DRAFT, MAXIMUM: 8 ft. (2.43 meters)
 DRAFT, MEAN: 7 ft. (2.13 meters)

CRUISING SPEED: 10 knots
 RANGE: 1,200 nautical miles
 SHAFT HORSEPOWER: 820 horsepower
 FUEL: #2 Diesel
 FUEL CAPACITY: 14,659 gallons (35 barrels)
 FUEL CONSUMPTION: 47 gal./hr.
 (at cruising speed)
 ENDURANCE: 15 days (stores)

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

The FERREL is outfitted and rigged for circulatory studies involving various types of tide and current measuring techniques.

Wet Oceanographic Lab 40 sq.ft.
 Buoy Workshop 450 sq.ft.
 Current Meter Lab 75 sq.ft.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 5
 SHIP'S OFFICERS & CREW: 14
 SCIENTISTS:

BERTHING

ONE-BUNK STATEROOMS:
 TWO-BUNK STATEROOMS: 10
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 20

MESSING

(GENERAL) MESS: 24 pers./seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: Complete First Aid
 equipment.

ADMINISTRATOR: Executive Officer

DECK MACHINERY

WINCHES

OCEANOGRAPHIC WINCH

Quantity: 1
Manufacturer: Beebe Brothers, Inc.
Drive: Electric
Line Pull Rate: 6,000 ft.-lbs.
Max. Pull Rate: 1 ft./sec.
Drum Capy:- Min.: 500 ft. of 5/16" wire
- Max.:
Regulated Drum Speed:

BT WINCH

1
ACCD Equipment Division
Electric
35 ft.-lbs.
10 ft./sec.
500 ft. of 3/16" wire

UTILITY WINCH

Quantity: 1
Manufacturer: U.S. Syncrogear
Drive: Electric
Line Pull Rate: 400 ft.-lbs.
Max. Pull Rate: 1.6 ft./sec.
Drum Capy - Min.:
- Max.:
Regulated Drum Speed:

CRANES AND BOOMS

UTILITY CRANES

Quantity: 1
Manufacturer: Austin Western
Type: Telescoping Boom, Diesel hydraulic drive
Rotation: 360°
Radius - Max.: 35 ft.
- Min.: 20 ft.
Hoisting Capy: 4,500 lbs. at min. radius
1,050 lbs. at max. radius

Quantity: 1
Manufacturer: Austin Western
Type: Telescoping Boom, Diesel hydraulic drive
Rotation: 360°
Radius - Max.: 35 ft.
- Min.: 20 ft.
Hoisting Capy: 10,000 at min. radius
7,000 at max. radius

A-FRAMES

Quantity:
Type: .
Clearance:
General Location:

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Danforth
Weight/Length: 800 lbs.
Chain Size:
Weight/Shot:

ANCHOR CHAINS

2
Stud Link Welded
60 fathoms
3/4"

Quantity:
Type:
Weight:
Length:
Size:

Quantity:
Type:
Manufacturer:
Drive:

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	1	Intech	1/25 W
HF RADIOTELEPHONE TRANSCEIVERS	1	RF Communications	1000 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]			
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1	Decca	
SATNAV			
LORAN-A/C	1	Sperry	
LORAN-C	1	Internav	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Microtenica	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	3	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER			
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS	1	DEC	PDP 8/E
HYDROPLOT CONTROLLER			
COMLOT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Caterpillar Tractor Co.

REDUCTION GEAR

Quantity: 2
Manufacturer: Caterpillar Tractor Co.
Ratio: 3.04:1
Drive:
Rating:

PROPELLER

Quantity: 2
Type: Fixed Pitch
Manufacturer:
No. of Blades: 4
Diameter: 60"

BOW THRUSTER

Type: Through Hull
Drive: Electric (Ship's Service)
Manufacturer: General Electric
Rating: 100 horsepower
Drive Train: Byrd-Johnson Fixed Pitch

FRESH WATER SYSTEM

NO EVAPORATOR

Quantity:
Type:
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption:
Storage Capacity: 9,000 gallons

POLLUTION CONTROL

Type of Treatment: Controlled volume flush evaporative toilet system
Sewage Holding Tank Capacity: 720-hr.
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Caterpillar/ Columbia Elec.	150 KW	440 VAC	440 VAC Three Phase 220 VAC Three Phase 110 VAC Single Phase
EMERGENCY GENERATOR	- 0 -				

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
Current Buoy Tender	1	28'	Aluminum	Lafco, Inc.	Diesel
Rescue and Dive Boat	1	14'	Inflatable Rubber Raft	Zodiac	Outboard Motor
UTILITY BOATS	1	17'	Fiberglass	Mako Marine	Outboard Motor
Current Buoy Tender	1	28'	Aluminum	Lafco, Inc.	Diesel



OREGON R551

LAUNCHED:
 DELIVERED: 1946
 COMMISSIONED:

DESIGNER:
 BUILDER: Astoria Marine
 Astoria, Oregon

CALL LETTERS: KNBH

SISTER SHIPS: None

HOME PORT: Seattle, Washington

GROSS TONNAGE: 219
 NET TONNAGE:
 DISPLACEMENT: 373
 HULL: Steel

LENGTH (LOA): 100.0 ft. (30.50 meters)
 BREADTH (Moulded): 26.5 ft. (8.15 meters)
 DRAFT, MAXIMUM: 12.0 ft. (3.65 meters)
 DRAFT, MEAN: 10.1 ft. (3.08 meters)

CRUISING SPEED: 9.3 knots
 RANGE: 5,800 nautical miles
 SHAFT HORSEPOWER: 600
 FUEL: #2 Diesel
 FUEL CAPACITY: 16,600 gallons
 FUEL CONSUMPTION:

ENDURANCE: 26 days
 CONSTRAINT: Fuel

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

Fisheries Research.

Oceanographic Laboratory 60 sq. ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS: 4
 CREW: 4
 SCIENTISTS: 5

BERTHING

ONE-BUNK STATEROOMS: 2
 TWO-BUNK STATEROOMS: 1
 THREE-BUNK STATEROOMS: 1
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 7

MESSING

WARDROOM MESS:
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS: 11

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid and
 Emergency Equipment

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

TRAWL WINCH

Quantity: 1
Manufacturer: Rowe Machine
Drive: Hydraulic
Line Pull: 6,000 lbs.
Max. Pull Rate: 150 ft./min.
Drum Capy - Min.:
- Max.: 5,400 ft. of 9/16-in. wire
Regulated Drum Speed:

BT WINCH

Quantity: 1
Manufacturer: Pacific Fishermen, Inc.
Drive: Hydraulic
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
- Max.: 1,000 ft. of 3/16-in. wire
Regulated Drum Speed:

CRANES AND BOOMS

CARGO BOOM

Quantity: 1
Manufacturer:
Type:
Rotation:
Radius - Max.: 6 ft. - clearance over side
- Min.:
Hoisting Capy: 9,000 lbs.

CARGO BOOM

Quantity: 1
Manufacturer:
Type:
Rotation:
Radius - Max.: 4 ft. - clearance over side
- Min.:
Hoisting Capy: 3,000 lbs.

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

Working Load:

GROUND TACKLE

Quantity: 2
Type: Danforth
Weight/Length: 750 lbs.
Chain Size: 7/8-in. steel cable, 600 ft.
1 shot of die lock chain

Quantity:
Type:
Weight:
Length:
Size:

Quantity:
Type:
Manufacturer:
Drive:

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	2	Intech	25 W
HF RADIOTELEPHONE TRANSCEIVERS	1 1 1	CAI Raytheon Northern	150 W
RADIO TELETYPE CAPABILITY	No		
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER	1	RCA	2 W
RADIO AUTO ALARM RECEIVER	No		
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	Yes		

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	2	Decca	
SATNAV			
LORAN-A/C	2	ENAC/Triton	
LORAN-C	1	Internav	
OMEGA			
RDF	1	Bendix	
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)			
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	Raytheon Ross	
DEEP WATER ECHO SOUNDER			
NARRO BEAM ECHO SOUNDER			
FISH FINDER	1	Simrad	
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

Quantity: 1
Type: Diesel
Manufacturer: Enterprise Engine Co.

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

Quantity:
Type:
Manufacturer:
No. of Blades:
Diameter:

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATOR

Quantity:
Type: Storage Tank
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption:
Storage Capacity: 14,000 gallons

POLLUTION CONTROL

Type of Treatment:

Sewage Holding Tank Capacity:

Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Caterpillar	100 KW	220 VAC	220 VAC 110 VAC
EMERGENCY GENERATOR					110 VDC

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	2				
	1	14'	Fiberglass	Boston Whaler	Outboard
	1	13'	Aluminum	Alumnacraft	Outboard



JOHN N. COBB R552

LAUNCHED: 1950
 DELIVERED:
 COMMISSIONED:

DESIGNER: W. C. Nickum & Sons
 BUILDER: Western Boat
 Tacoma, Washington

CALL LETTERS: WMVC

SISTER SHIPS:

HOME PORT: Seattle, Washington

GROSS TONNAGE: 185
 NET TONNAGE: 78
 DISPLACEMENT: 250 tons
 HULL: Wood, ice strengthened
 with iron bark
 LENGTH (LOA): 93 feet (28.3 meters)
 BREADTH (Moulded): 26 feet (7.6 meters)
 DRAFT, MAXIMUM: 14 feet (4.3 meters)
 DRAFT, MEAN: 12 feet (3.7 meters)

CRUISING SPEED: 9.3 knots
 RANGE: 3,297 nautical miles
 SHAFT HORSEPOWER: 325
 FUEL: #1 Diesel
 FUEL CAPACITY: 7,800 gallons
 FUEL CONSUMPTION:

ENDURANCE: 14 days, 18 hours
 CONSTRAINT: Fuel

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

Fisheries research.

Vessel is rigged and equipped for Western-type double warp stern trawl.

Lab space is approximately 150 sq.ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS: 4
 SHIP'S OFFICERS & CREW: 4
 SCIENTISTS: 4

BERTHING

ONE-BUNK STATEROOMS:
 TWO-BUNK STATEROOMS: 4
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS: 1
 TOTAL BUNKS: 13

MESSING

COMMON MESSING AREA: 8 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid and
 Emergency Equipment

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

	TRAWL WINCH	OCEANOGRAPHIC WINCH
Quantity:	1	1
Manufacturer:	Rowe Machine Works	
Drive:	Hydraulic	
Line Pull:	14,000 ft.	
Max. Pull Rate:	8,000 ft.	
Drum Capy - Min.:	7,200 ft. - 1/2" dia. wire	6,000 ft., 3/16" wire
- Max.:		
Regulated Drum Speed:		
	BOAT WINCH	BT WINCH
Quantity:	1	1
Manufacturer:		
Drive:		
Line Pull Rate:		
Max. Pull Rate:		
Drum Capy - Min.:		600 ft., 3/32" wire
- Max.:		
Regulated Drum Speed:		

CRANES AND BOOMS

	BOOM WINCHES	
Quantity:	1 Topping	
Manufacturer:	Marco	
Type:	Topping	
Rotation:		
Radius - Max.:		
- Min.:		
Hoisting Capy:		
Drive:	Electric	Electric
	BOOM	
Quantity:	1	
Manufacturer:		
Type:	Cargo	
Rotation:		
Radius - Max.:		
- Min.:		
Hoisting Capy:	6,000 lbs.	
Span:	30 ft.	

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

GROUND TACKLE

	ANCHORS	ANCHOR CHAIN
Quantity:	2	1
Type:	Navy Stockless	
Weight/Length:		105 fathom
Chain Size:		3/4"
Weight/Shot:		
Quantity:		ANCHOR CABLE
Type:		1
Weight:		125 fathom
Length:		
Size:		7/8"
		ANCHOR WINDLASS
Quantity:	1	
Type:	Navy Stockless	
Manufacturer:	Rowe Machine Works	
Drive:	Hydraulic	
Rated:	5 horsepower	

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	1	MODAR	1/25 W
HF RADIOTELEPHONE TRANSCEIVERS	1	SR-210	100 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS	1	Johnson CB	
EMERGENCY RADIOS: PORTABLE TRANSCEIVER MKKay Hand-powered	1		
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	4		
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1	Decca	
SATNAV			
LORAN A	1	Sperry	MK 5
LORAN A/C	2	(1) Benmar (1) Mico	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)			
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	1	Ross	100 KHZ
DEEP WATER ECHO SOUNDER			
NARRO BEAM ECHO SOUNDER			
FISH FINDER, VERTICAL	1	Simrad	38 KHZ
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPLLOT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINE

REDUCTION GEAR

Quantity: 1
Type: Diesel
Manufacturer: Fairbanks Morse

1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLER

Quantity: 1
Type: Fixed Pitch
Manufacturer:
No. of Blades: 3
Diameter: 60"

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

Quantity: 1
Type: Storage Tank
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption:
Storage Capacity: 6,000 gallons

POLLUTION CONTROL

Type of Treatment:

Sewage Holding Tank Capacity:

Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	General Motors/ Electrical Machinery Mfr.	65 hp	240 V	240 VAC Three Phase 110 VAC Single Phase 220 VAC Single Phase (isolated)
EMERGENCY GENERATOR	-0-				

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					
Skiff	1	18'	Wood	Fairliner	Gasoline Engine



RUDE S590

LAUNCHED:
 DELIVERED: December 14, 1966
 COMMISSIONED: March 29, 1967

DESIGNER: MARAD
 BUILDER: Jakobson Shipyard
 Oyster Bay, New York

CALL LETTERS: WTET

SISTER SHIPS: HECK

HOME PORT: Norfolk, Virginia

GROSS TONNAGE: 150
 NET TONNAGE: 42
 DISPLACEMENT: 190
 HULL: Corten Steel

LENGTH (LOA): 90.00 ft. (27.43 meters)
 BREADTH (Moulded): 22.00 ft. (6.71 meters)
 DRAFT, MAXIMUM: 7.00 ft. (2.13 meters)
 DRAFT, MEAN: 6.75 ft. (2.06 meters)

CRUISING SPEED: 10 knots
 RANGE: 800 nautical miles
 SHAFT HORSEPOWER: 800 horsepower
 FUEL: #2 Diesel
 FUEL CAPACITY: 4,000 gallons
 FUEL CONSUMPTION: 34-42 gallons/hour
 (at cruising speed)
 ENDURANCE: 80 hours
 MAX. CONSTRAINT: Fuel

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

The vessel was especially designed and equipped for Wire Drag Surveys.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 3
 SHIP'S OFFICERS & CREW: 8
 SCIENTISTS:

BERTHING

ONE-BUNK STATEROOMS:
 TWO-BUNK STATEROOMS: 5
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 10

MESSING

MESS HALL 8 persons/seating
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 0
 MEDICINE CHEST: First Aid
 equipment only.

ADMINISTRATOR:

DECK MACHINERY

WINCHES

WIRE DRAG WINCH

Quantity: 1
Manufacturer: New England Trawler Equipment Co.
Drive: Hydraulic
Line Pull Rate: 2,800 ft.-lbs.
Max. Pull Rate: 130 ft./min.
Drum Capy: - Min.: 10,000 ft., 1/4" dia. wire
 - Max.:
Regulated Drum Speed:

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
 - Max.:
Regulated Drum Speed:

CRANES AND BOOMS

CRANE

Quantity: 1
Manufacturer: Silent Hoist Crane Company
Type: Telescoping Boom, electro-hydraulic
Rotation:
Radius - Max.: 22 ft.
 - Min.: 7 ft.
Hoisting Capy: 5,500 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy:

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

Working Load:

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Stockless
Weight/Length: 560 lbs. (each)
Chain Size:
Weight/Shot:
Chain Size - Port:
Starboard:

ANCHOR CHAINS

2
Cast Steel
60 fathoms

11/16"
3/4"

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Warping Head, independent wildcats and capstan
Manufacturer: New England Trawler Equipment Co.
Drive: Hydraulic

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	1		25 W
HF RADIOTELEPHONE TRANSCEIVERS	1		150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	Yes.		

OTHER:

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1 + 1 repeater	Decca	25 W
SATNAV			
LORAN-A			
LORAN-C			
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT	1	Raydist	
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	6	Raytheon	21 KHZ
PORTABLE ECHO SOUNDER	1	Sonar Angler	
NARROW BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
Hydrographic hand loggers and teletypes only.			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Cummins Engine Co.
Ratio:

REDUCTION GEAR

2
Hydraulic
Twin Disc Clutch Co.
3.5:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity: 2
Type: Fixed Pitch, Kaplan Nozzle
Manufacturer:
No. of Blades: 4
Diameter: 3.5 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

Quantity:
Type: Storage tank
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption: 500 gallons/day
Storage Capacity: 3,800 gallons

POLLUTION CONTROL

Type of Treatment: Macerator-Chlorinator
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity: Bilge holding only.

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/ Delco	100 HP	230 VAC	230 VAC Three Phase
EMERGENCY GENERATOR	- 0 -				

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					
Rescue/Utility Boat	1	20'		Gull of Bristol	Diesel
Utility Skiff	1	16.7'		Boston Whaler	Gasoline Outboard Motor

HECK S591



LAUNCHED:
DELIVERED: March 11, 1967
COMMISSIONED: March 29, 1967

DESIGNER: MARAD
BUILDER: Jakobson Shipyard
Oyster Bay, New York

CALL LETTERS: WTEY

SISTER SHIPS: RUDE

HOME PORT: Norfolk, Virginia

GROSS TONNAGE: 150
NET TONNAGE: 42
DISPLACEMENT: 190
HULL: Corten Steel

LENGTH (LOA): 90.00 ft. (27.43 meters)
BREADTH (Moulded): 22.00 ft. (6.71 meters)
DRAFT, MAXIMUM: 7.00 ft. (2.13 meters)
DRAFT, MEAN: 6.75 ft. (2.06 meters)

CRUISING SPEED: 10 knots
RANGE: 800 nautical miles
SHAFT HORSEPOWER: 800 horsepower
FUEL: #2 Diesel
FUEL CAPACITY: 4,000 gallons
FUEL CONSUMPTION: 34-42 gallons/hour
(at cruising speed)
ENDURANCE: 80 hours
MAX. CONSTRAINT: Fuel

FLIGHT DECK:

SCIENTIFIC CAPABILITY

The vessel was especially designed and equipped for Wire Drag Surveys.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS: 2
SHIP'S OFFICERS & CREW: 8
SCIENTISTS:

BERTHING

ONE-BUNK STATEROOMS:
TWO-BUNK STATEROOMS: 5
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS:
FIVE-BUNK STATEROOMS:
TOTAL BUNKS: 10

MESSING

MESS HALL 8 persons/seating
SHIP'S OFFICERS' MESS:
TECHNICIANS'S MESS:
CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: 0
MEDICINE CHEST: First Aid
equipment only.

ADMINISTRATOR:

DECK MACHINERY

WINCHES

WIRE DRAG WINCH

Quantity: 1
Manufacturer: New England Trawler Equipment Co.
Drive: Hydraulic
Line Pull Rate: 2,800 ft.-lbs.
Max. Pull Rate: 130 ft./min.
Drum Capy: - Min.: 10,000 ft., 1/4" dia. wire
 - Max.:
Regulated Drum Speed:

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
 - Max.:
Regulated Drum Speed:

CRANES AND BOOMS

CRANE

Quantity: 1
Manufacturer: Silent Hoist Crane Company
Type: Telescoping Boom, electro-hydraulic
Rotation:
Radius - Max.: 22 ft.
 - Min.: 7 ft.
Hoisting Capy: 5,500 lbs.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy:

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

Working Load:

GROUND TACKLE

BOW ANCHORS

Quantity: 2
Type: Stockless
Weight/Length: 560 lbs. (each)
Chain Size:
Weight/Shot:
Chain Size - Port:
Starboard:

ANCHOR CHAINS

2
Cast Steel
60 fathoms

11/16"
11/16"

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Waring Head, independent wildcats and capstan
Manufacturer: New England Trawler Equipment Co.
Drive: Hydraulic

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	1		25 W
HF RADIOTELEPHONE TRANSCEIVERS	1		150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	Yes.		
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1 + 1 repeater	Decca	25 W
SATNAV			
LORAN-A			
LORAN-C			
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT	1	Raydist	
GYRO COMPASS (Repeaters)	1	Sperry	

OTHER:

ACOUSTICS

SHALLOW WATER ECHO SOUNDER	6	Raytheon	21 KHZ
PORTABLE ECHO SOUNDER	1	Sonar Angler	
NARROW BEAM ECHO SOUNDER			

FISH FINDER

STEERABLE SONAR

OTHER:

DATA ACQUISITION SYSTEM

Hydrographic hand loggers and teletypes only.

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINES

Quantity: 2
Type: Diesel
Manufacturer: Cummins Engine Co.
Ratio:

REDUCTION GEAR

2
Hydraulic
Twin Disc Clutch Co.
3.5:1

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity: 2
Type: Fixed Pitch, Kaplan Nozzle
Manufacturer:
No. of Blades: 4
Diameter: 3.5 ft.

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

Quantity:
Type: Storage tank
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption: 500 gallons/day
Storage Capacity: 3,800 gallons

POLLUTION CONTROL

Type of Treatment: Macerator-Chlorinator
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity: Bilge holding only.

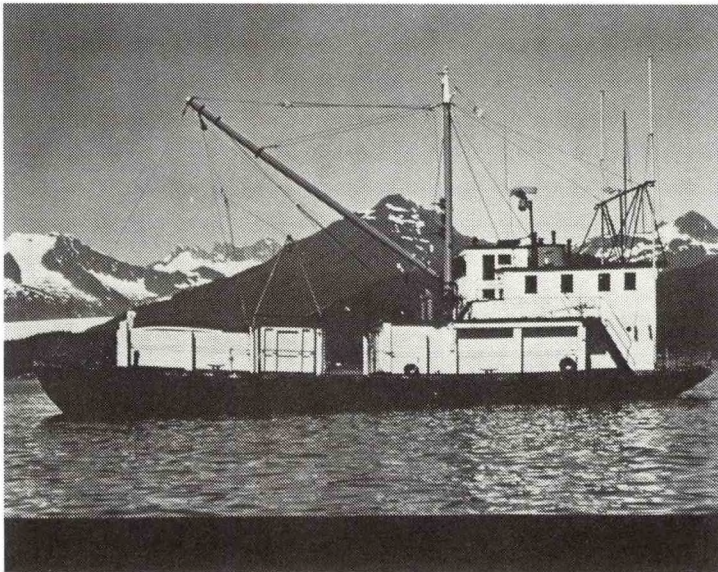
ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	Detroit Diesel/ Delco	100 HP	230 VAC	230 VAC Three Phase
EMERGENCY GENERATOR	- 0 -				

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS					
Rescue/Utility Boat	1	20'		Gull of Bristol	Diesel
Utility Skiff	1	16.7'		Boston Whaler	Gasoline Outboard Motor

MURRE II R663



LAUNCHED:
 DELIVERED:
 COMMISSIONED:
 YEAR BUILT: 1943

DESIGNER: Hanson*
 BUILDER: Maritime Shipyards
 Seattle, Washington

*CONVERTED: From U.S. Army supply power
 barge

CALL LETTERS: KJLM

SISTER SHIPS: None

HOME PORT: Auke Bay, Alaska

GROSS TONNAGE: 189
 NET TONNAGE: 95
 DISPLACEMENT: 295 tons
 HULL: Wood

LENGTH (LOA): 86'0" (26.0 meters)
 BREADTH (Moulded): 26'8" (8.1 meters)
 DRAFT, MAXIMUM: 7'6" (2.3 meters)
 DRAFT, MEAN: 6'6" (2.0 meters)

CRUISING SPEED: 8 knots
 RANGE: 2,500 nautical miles
 SHAFT HORSEPOWER: 208
 FUEL: #2 Diesel
 FUEL CAPACITY: 5,000 gallons
 FUEL CONSUMPTION:

ENDURANCE: 8 days

FLIGHT DECK: No

SCIENTIFIC CAPABILITY

Fisheries Research.

Chemical Laboratory 130 sq.ft.
 Biological Laboratory 200 sq.ft.

HABITABILITY

COMPLEMENT

LICENSED OFFICERS: 2
 SHIP'S OFFICERS & CREW: 1
 SCIENTISTS: 6

BERTHING

ONE-BUNK STATEROOMS:
 TWO-BUNK STATEROOMS:
 THREE-BUNK STATEROOMS:
 FOUR-BUNK STATEROOMS:
 FIVE-BUNK STATEROOMS:
 TOTAL BUNKS: 5

MESSING

GENERAL MESS: Yes
 SHIP'S OFFICERS' MESS:
 TECHNICIANS'S MESS:
 CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
 MEDICINE CHEST: First Aid supplies

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

TRAWL & CARGO WINCH

Quantity: 1
Manufacturer: Marco
Drive: Hydraulic
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.: 550 meters of 5/8" cable
- Max.:
Regulated Drum Speed:

HYDROGRAPHIC WINCH

1
New England Trawler Co.
Electric
1,000 meters of 5/32" wire

UTILITY WINCH

Quantity: 1
Manufacturer: Markey
Drive: Hydraulic
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.: 800 meters of 1/32" wire
- Max.:
Regulated Drum Speed:

CRANES AND BOOMS

CARGO BOOM

Quantity: 1
Manufacturer: Braden and Apex
Type: Vanged Boom
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

GROUND TACKLE

ANCHOR WINDLASS

Quantity: 1
Type: Rowe Machine Works
Weight/Length:
Chain Size:
Weight/Shot:
Cable Size: 100 fathoms of 7/8" cable

Quantity:
Type:
Weight:
Length:
Size:

Quantity:
Type:
Manufacturer:
Drive:

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	1	Intech	25 W
HF RADIOTELEPHONE TRANSCEIVERS	2	Northern	150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY - Vessel is equipped with EPIRBs. [Emergency Position Indicating Radiobeacon (EPIRB)]			
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1	Decca	
SATNAV			
LORAN-A			
LORAN-C			
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1		Magnetic
OTHER: MAGNETIC COMPASS	1		
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	2	(1) Ross (1) Kelvin Hughes	
DEEP WATER ECHO SOUNDER			
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Geared Diesel

MAIN ENGINE

Quantity: 2
Type: Diesel
Manufacturer: Caterpillar

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLER

Quantity: 2
Type: Fixed Pitch
Manufacturer: Coolidge
No. of Blades: 3
Diameter:

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

Quantity:
Type:
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption:
Storage Capacity: 2,000 gallons

POLLUTION CONTROL

Type of Treatment:
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	General Motors	20 KW 30 KW	110 VDC	110 VDC 110 VAC (5KW converter)
EMERGENCY GENERATOR					

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	1	17'	Fiberglass	Boston Whaler	Gasoline Outboard

SHENEHON R693

LAUNCHED:
DELIVERED:
COMMISSIONED: 1964 from conversion
BUILT: 1953 (U.S. Army T-Boat)

DESIGNER: John H. Wells
BUILDER: Missouri Valley Steel
Leavenworth, Kansas

CALL LETTERS: WDAG

SISTER SHIPS: VIRGINIA KEY

HOME PORT: Monroe, Michigan

GROSS TONNAGE:
NET TONNAGE:
DISPLACEMENT: 90 tons
HULL: Welded Steel

LENGTH (LOA): 65 ft. (20.0 meters)
BREADTH (Moulded): 17 ft. (5.2 meters)
DRAFT, MAXIMUM: 6 ft. (1.8 meters)
DRAFT, MEAN:

CRUISING SPEED: 10 knots
RANGE: 2,100 nautical miles
SHAFT HORSEPOWER: 325 horsepower
FUEL: #2 Diesel
FUEL CAPACITY: 1,050 gallons
FUEL CONSUMPTION: 3 gallons/hour

ENDURANCE: 8 days
CONSTRAINT:

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

General Limnology.

One general laboratory with 200 sq.ft.
of working area.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS:
SHIP'S OFFICERS & CREW: 3
SCIENTISTS: 5

BERTHING

ONE-BUNK STATEROOMS:
TWO-BUNK STATEROOMS:
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS:
FIVE-BUNK STATEROOMS:
SIX-BUNK STATEROOMS: 1
TOTAL BUNKS: 6

MESSING

GALLEY, SMALL: 1
SHIP'S OFFICERS' MESS:
TECHNICIANS'S MESS:
CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: - 0 -
MEDICINE CHEST: First Aid equipment, only.

ADMINISTRATOR: Ship's Officers

DECK MACHINERY

WINCHES

HYDROGRAPHIC WINCH

Quantity: 1
Manufacturer: Electric
Drive:
Line Pull Rate: 650 lbs.
Max. Pull Rate:
Drum Capy: - Min.: 2,000 ft. of 5/32-inch wire
- Max.:
Regulated Drum Speed:

BATHYTHERMOGRAPHIC WINCH

Quantity: 1 (6-track slip ring)
Manufacturer:
Drive: Electric
Line Pull Rate: 500 lbs.
Max. Pull Rate:
Drum Capy: - Min.: 900 ft. of .31-inch 6 conductor cable
- Max.:
Regulated Drum Speed:

CRANES AND BOOMS

BOOM

Quantity: 1
Manufacturer: HIAB
Type: Articulated Boom
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy: 1,500 lbs. with 8-ft. outreach
- Min.: 7,500 lbs. with 16-ft. outreach
- Max.: 750 lbs. with 23-ft. outreach

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
- Min.:
Hoisting Capy:

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

GROUND TACKLE

Quantity: 2
Type: Kedge
Weight/Length: 250 lbs.
Chain Size:
Weight/Shot: 3 shots

Quantity:
Type:
Weight:
Length:
Size:

Quantity:
Type:
Manufacturer:
Drive:

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM RADIO	1	Motorola	25 W
HF RADIOTELEPHONE TRANSCEIVERS			
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR	1	Decca	
SATNAV			
LORAN-A			
LORAN-C	1	Raytheon	
OMEGA			
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1	Sperry	
OTHER: FATHOMETER	1		
HYDROMETEOROLOGICAL SYSTEM	1	(records on 7-bit punch paper tape)	
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	1	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER			
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPLIT INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Diesel

MAIN ENGINE

Quantity: 1
Type: Diesel
Manufacturer: Caterpillar

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLER

Quantity: 1
Type: Single Screw, Fixed Pitch
Manufacturer:
No. of Blades:
Diameter:

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

Quantity:
Type:
Manufacturer:
Max. Production:
Normal Production:
Normal Consumption:
Storage Capacity: 1,000 gallons

POLLUTION CONTROL

Type of Treatment:
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	1	General Motors	30 KW	AC	AC
	1	Onan	12 KW	AC	DC
EMERGENCY GENERATOR					

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					
UTILITY BOATS	1	13'		Boston Whaler	

VIRGINIA KEY R680

LAUNCHED: 1952
DELIVERED:
COMMISSIONED:
CONVERTED: 1972

DESIGNER: John Wells
BUILDER: Higgins, Inc.
New Orleans, Louisiana

CALL LETTERS: WTAV

SISTER SHIPS: SHENEHON

HOME PORT: Miami, Florida

GROSS TONNAGE:
NET TONNAGE:
DISPLACEMENT: 90 tons
HULL: Welded Steel

LENGTH (LOA): 65 ft. (19.8 meters)
BREADTH (Moulded): 17 ft. (5.2 meters)
DRAFT, MAXIMUM: 7 ft. (2.1 meters)
DRAFT, MEAN:

CRUISING SPEED: 9.5 knots
RANGE: 1,000 nautical miles
SHAFT HORSEPOWER: 325 horsepower
FUEL: #2 Diesel
FUEL CAPACITY: 1,845 gallons
FUEL CONSUMPTION: 15 gallons/hour
(at cruising speed)

ENDURANCE:
CONSTRAINT:

FLIGHT DECK: No.

SCIENTIFIC CAPABILITY

The VIRGINIA KEY has performed most seagoing scientific functions employed in oceanographic research. An oceanographic laboratory of 120 sq. ft. is available.

HABITABILITY

COMPLEMENT

COMMISSIONED OFFICERS:
SHIP'S OFFICERS & CREW: 3
SCIENTISTS: 5

BERTHING

ONE-BUNK STATEROOMS:
TWO-BUNK STATEROOMS:
THREE-BUNK STATEROOMS:
FOUR-BUNK STATEROOMS: 2
FIVE-BUNK STATEROOMS:
TOTAL BUNKS: 8

MESSING

COMMON MESSING AREA: 4 persons/seating
SHIP'S OFFICERS' MESS:
TECHNICIANS'S MESS:
CREW MESS:

MEDICAL FACILITIES

NO. OF SICKBAY BUNKS: -0-
MEDICINE CHEST: First Aid and
Emergency Equipment

ADMINISTRATOR: Master

DECK MACHINERY

WINCHES

HYDROGRAPHIC WINCH

Quantity: 1
Manufacturer:
Drive: Electro-hydraulic, 20 horsepower
Line Pull Rate:
Max. Pull Rate:
Drum Capy: - Min.: 11,000 ft. of 3/16" wire
 - Max.:
Regulated Drum Speed:

Quantity:
Manufacturer:
Drive:
Line Pull Rate:
Max. Pull Rate:
Drum Capy - Min.:
 - Max.:
Regulated Drum Speed:

CRANES AND BOOMS

CRANE

Quantity: 1
Manufacturer:
Type: Articulated Boom
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy: 4,000 lbs.
Outreach: 12 ft.

Quantity:
Manufacturer:
Type:
Rotation:
Radius - Max.:
 - Min.:
Hoisting Capy:

A-FRAMES

Quantity:
Type:
Clearance:
General Location:

GROUND TACKLE

ANCHORS

Quantity: 2
Type: Danforth
Weight/Length: 50 lbs.
Chain Sizes: 70 ft. of 5/8 inch
600 ft. of 1/2 inch

Quantity:
Type:
Weight:
Length:
Size:

ANCHOR WINDLASS

Quantity: 1
Type: Hydraulic
Manufacturer:
Drive:

ELECTRONICS

COMMUNICATIONS

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Power Output</u>
VHF/FM BRIDGE TO BRIDGE TRANSCEIVERS	1	Intech	25 W
HF RADIOTELEPHONE TRANSCEIVERS	1	RF Communications	150 W
RADIO TELETYPE CAPABILITY			
MF SAR TRANSCEIVERS			
EMERGENCY RADIOS: PORTABLE TRANSCEIVER			
RADIO AUTO ALARM RECEIVER			
VHF EMERGENCY CAPABILITY [Emergency Position Indicating Radiobeacon (EPIRB)]	2		
OTHER:			

	<u>Quantity</u>	<u>Manufacturer</u>	<u>Frequency/Model</u>
<u>NAVIGATION</u>			
RADAR (Surface Search)	2		
SATNAV			
LORAN-A/C	1	Radiomarine	
LORAN-C			
OMEGA	1	Tracor	
RDF			
LINE OF SIGHT POSITIONING EQUIPMENT			
MEDIUM RANGE POSITIONING EQUIPMENT			
GYRO COMPASS (Repeaters)	1		
OTHER:			
<u>ACOUSTICS</u>			
SHALLOW WATER ECHO SOUNDER	1	Raytheon	21 KHZ
DEEP WATER ECHO SOUNDER	1	Edo/PFR	12 KHZ
NARRO BEAM ECHO SOUNDER			
FISH FINDER			
STEERABLE SONAR			
OTHER:			
<u>DATA ACQUISITION SYSTEM</u>			
COMPUTERS			
HYDROPLOT CONTROLLER			
COMPUTER INCREMENTAL PLOTTER			

ENGINEERING

MAIN PROPULSION

Type: Diesel

MAIN ENGINE

Quantity: 1
Type: Diesel
Manufacturer: Caterpillar
Horsepower: 325 BHP

Quantity:
Manufacturer:
Ratio:
Drive:
Rating:

PROPELLERS

Quantity: 1
Type: Fixed Pitch
Manufacturer:
No. of Blades:
Diameter:

Type:
Drive:
Manufacturer:
Rating:
Drive Train:

FRESH WATER SYSTEM

EVAPORATOR

Quantity: 1
Type:
Manufacturer:
Max. Production: 100 gallons/day
Normal Production:
Normal Consumption:
Storage Capacity: 700 gallons

POLLUTION CONTROL

Type of Treatment:
Sewage Holding Tank Capacity:
Oily Waste Holding Tank Capacity:

ELECTRICAL SYSTEM

<u>Type</u>	<u>Quantity</u>	<u>Manufacturer</u>	<u>Rating</u>	<u>Output</u>	<u>Power Available</u>
SHIP SERVICE GENERATORS	2	GM/Delco	30 KW	208 VAC	208 VAC Three Phase 110 VAC Single Phase 120 VDC (5KW Rectifier)
EMERGENCY GENERATOR					

LAUNCHES AND SMALL BOATS

<u>Type</u>	<u>Quantity</u>	<u>Length</u>	<u>Hull</u>	<u>Manufacturer</u>	<u>Propulsion</u>
SURVEY LAUNCHES					

UTILITY BOAT - Yes.