Carolina/Atlantic Marine Services

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Certified Marine Surveyor - National Association of Marine Surveyors *Accredited Marine Surveyor - Society of Accredited Marine Surveyors*

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11 October 2010

Survey # 1121010

TO WHOM IT MAY CONCERN:

This is to Certify

That pursuant to the request of Messr's BEA Architects, Inc., 3075 NW South River Drive, Miami, FL 33142, Attention: Mr. Bruno Ramos, the undersigned surveyor, under date 8 October 2010, attended the commercial tug

"CARLO MCALLISTER"

while moored afloat at McAllister Towing, Wilmington, NC.

Purpose of the attendance being to ascertain the condition of the vessel and to comment as to the present day and replacement values thereof as equipped.

Subject vessel is constructed of steel, designed with model bow, rounded bilge, elliptical stern, single diesel crew propulsion, flush weatherdeck, raised superstructure form forward quarter through amidships with raised wheelhouse atop. .

GENERAL DATA

USCG/State Requirements in ***BOLD ITALICS***

Documentation Number: 632981 ***Card aboard:*** sighted
(# displayed/permanently affixed): sighted ***Location:*** ER
Gross/Net tonnage: 143/97 Hailing/Home Port:
Year Built: 1945 By/At: Morris Heights, NY
Call sign: WDB 7651

Documented Length: 94.1'
Breadth: 25.0'
Depth: 8.7'
Construction: welded steel

Rigging

Spars: fore and aft signal masts with appropriate lighting
Deck hardware: Stainless Double bitt @ bow, twin double quarter bitts bow and stern, stern double bitt, electric capstan

Systems

Propulsion Diesel

Mfr.: Alco 16 Cylinder Hp: 3000+ Hours: unavailable
Model: 251 Serial #: RB 4441
Cooling: Rawwater w/ heat exchanger
Exhaust: Dry/insulated
Instrumentation: Complete/ER
Alarms: none; manned ER
Controls: Air controls
Transmission(s) Mfr.: Haley Ratio: illegible
Model/Code: SRV2835 Serial #: illegible
Propeller shafts: 8" stub and jackshaft Seals: Stuffing box
Supports: Stern tube
Propellers: not sighted; survey held afloat
Steering: Electric/hydraulic; dual rams
Ventilation: Natural, powered ventilation fans

Fuel System

Tank(s)/Capacity/Location: Reported 6 tanks 29000+ gallons total capacity
Valves: Manifold/ER Filters: ER Lines: steel Vents: Screened

Electrical System(s)

AC System Voltage: 220VAC Shorepower: 1 x 100A
Generator (Mfr.): 2 x Delco powered by 4-71 GM/Detroit Diesel engines
kW: 2 x 40 Hours: Unavailable
Engine Model/Serial #: Fwd: 1043 7005/4A246868 Aft: 1045 7001/40246865
Circuit Protection: Main and distribution breakers Location: ER
Other: Main panel box @ ER w/voltmeters/ammeters

DC System Voltage: 12
Batteries: 2 x 8D 1 x #24 ***(Bridge emergency radio supply)***
Location: ER/Bridge, Secured, Terminals Covered
Main switch (es): None fitted
Charging: Portable chargers at bridge and ER; plugged into AC outlets
Circuit Protection: fuses Location: Bridge

Required Equipment

Life Jackets *(PFD); #/Type/accessible:* Type I req'd for all personnel, equipped with retro reflective tape, whistles (marker lights recommended as well.)
Throwable apparatus*:* 3 x 18" ring buoys w/retrieval lines attached; 2 w/Strobes
Visual distress signals: not sighted; required aboard

Fire Protection

Semi-portable system: Type V Carbon Dioxide Expiration: undated
Fixed system: Electric pump with dual stations; with hoses and nozzles.

Portable Extinguishers Class A=Combustibles Class B=Flammables Class C=Electrical
Type/Location: 6 x BIIIDCP/ER (2 x upper 4 x lower ER) Expiration: 10/09
Type/Location: BIIDCP: wheelhouse/Expirations 10/09
BIIDCP: Main cabin crosswalk/Expiration 10/09
BIIDCP forepeak Expiration: 10/09

Ventilation: Powered and natural
Sound producing Devices: Air horn, bell
Navigation Lights: Mounted electric
Oil Pollution placard *(5" x 8" req'd >26'LOA****):*** posted aboard
Garbage Disposal Placard *(4"x 9"req'd >26'LOA****):*** posted aboard
Marine Sanitation Device: fitted
Navigation rules *(copy required for vessels 12m or greater in length):* sighted aboard

Other Recommended Equipment

First Aid Kit: not sighted; required by regulation
CO Monitor: not sighted; recommended
Fire/Smoke detector: not sighted; required
EPIRB: ACR 406 MHz sighted Expiration: Not confirmed
Liferaft: Crewsaver 6 man coastal; Inspection due 8/11; Static release due 8/12

Ground Tackle
Anchor(s): none sighted Rode: see above Spare: none sighted

Bilge Pumps
(#/capacity/location): High capacity electric pump with manifold system
Automatic portable AC sump pumps at shaft alley
Bilge/High Water Alarm: automatic system in ER

Navigation Aids
Compass: Ritchie Compass
VHF: Icom ICM 502, Uniden Solara w/DSC
GPS: standard Horizon GPS Chart 150
Depth: Furuno LS4100 Echo Sounder
Autopilot: Remote steering dodger
Spotlight: Remote
Other: Furuno Radar
AIS: Furuno AIS FA150
Bridge to galley/accommodations/ER Intercom system

Domestic Equipment

Freshwater:
Tanks: integral steel; 2 x 1392 gallons each plus additional tankage possible
Pump(s): 110VAC w/accumulator
Water heater: 20 gallon electric

Sanitary System
1 toilet w/***Marine Sanitation Device****: holding tank with treatment system*

Galley
Range: Electric
Reefer: Full size top freezer
Other: Microwave

Other
TV: Galley
Air Conditioning: First 36/Goodman 220VAC 13 Seer Heat pump

NARRATIVE

Construction: All welded steel hull; plating on frames of various dimensions on 16" centers, welded decks with nonskid coating, all well painted/finished; welded superstructure.

Hull Topsides: Not examined closely; survey held afloat. Bow puddin' of 7 tires secured with chains, additional hull protection afforded by half round rubrails, and tire fenders secured with shackled chains and padeyes, 1 missing fender starboard side.

Hull Bottom: Not examined; survey held afloat; last dry docking date unreported.

Weatherdeck: Painted, with aggressive nonskid coating, plating is firm underfoot. Deck is encircled by a raised waist with welded stanchions, noted wasted and holed to aft of amidships each side. Recent stainless bow double bitt forward atop doubler. Dual quarter bitts each side forward are poor; bent and/or wasted. Escape provided forward with Freeman hatch. Sidedecks each side; grabrails inboard; broken port forward missing section starboard aft. Aft deck is sheltered forward, capstan to starboard, double towing bitt centerline. Quarter bitts each side are reported recent along with waist framing and plating around the elliptical stern. Hatches in the sole access tanks. Another smaller double bitt is mounted aft. A span is provided forward of the line rack aft, over steering gear. Steering gear is worn; mounts for dual hydraulic rams are worn and heavily rusted; slop noted in linkages underway; notably at starboard ram.

Superstructure: Welded steel, elliptical forward, with bell centerline, sealed lighting all around fore to aft each side. Vertical ladder is provided forward to bridge deck. Water tight doors each side with sills elevated 24" above main deck level. Doors are dogged with gaskets with some wastage apparent around door gasket flanges. Fills and bilge drains are provided each side. Fuel tank vents are fitted with screens. Fire axes are affixed port and starboard (rusty) forward and aft. Fire stations each side with rack mounted hoses and nozzles. Deck is sheltered aft with storage room to starboard, upper ER access starboard of centerline aft.

Bridge Deck: Painted steel, encircled with raised fishplate and lifelines in welded stanchions. Wheelhouse is octagonal forward with windows in rubber gaskets; weathered gasket and blistered rust noted around lower rims. Wheelhouse is elevated with metal gratings and stairs each side. Stack follows the wheelhouse with ladder port side to access cabin top. Blistered rust is noted at the base of the stack vent grate port side under the ladder. Deck is open aft with centerline power vent stack. Metal railings are provided aft, oil cleanup supply tub is lashed at the starboard rail. Liferaft port aft in canister. Signal mast aft with flag halyard and lighting; middle lighting junction box was found loose/adrift.

Wheelhouse: Welded steel with watertight doors each side; gaskets and doors in good condition. Access is provided atop with ladder to starboard alongside the stack. Damage was noted at cabin top forward corners each side. Navigation/running lights are fitted

each side; lights boards are wasted; holed to port. Radome open array is mounted atop a tripod mast. Wiring appears to be serviceable; all exposed, painted and some loose and adrift. Halogen lights are provided fore and aft illuminating the forward and aft decks. Interior is finished in varnished wood and paneling with wooden trim. Forward dash with dual lever style controls for steering and shift/throttle, limited instrumentation only. Navigation aids are mounted forward overhead. Berth is provided aft over storage, centerline stair to below.

Main cabin: Galley forward with curved counter and chairs forward, wall mounted Magnavox TV. Galley cabinets aft with outboard reefer to port, stove aft. Rear access open to a cross passageway with exterior entry doors each side. Head closure is to port forward with toilet and shower. Companionway centerline forward leads below decks to crew accommodations. Doors aft each side open into the upper engine room.

Forepeak: Tankage is provided forward, followed by storage with shell framing and plating exposed. Tankage is located under this compartment; twin 1392 gallon freshwater tanks with labels atop bolted covers. Crew quarters are framed in wallboard and wooden studs braced overhead, open outboard each side with a safety float in the void one side, miscellaneous gear opposite. Some distorted/bent frames and plating dents noted at the void space between the accommodations framing and shell framing each side. Accommodations with doors fore and aft, sealed fluorescent lights overhead, berths over storage, lockers aft; secured to the bulkhead.

Forward Bilge: Single bilge access at the crew quarters opened; center tank found full of water; lid recommended secured if compartment is to be used as ballast to prevent spillage from flooding the accommodations in heavy sea conditions.

Upper engine room: With metal grating each side and across aft; loose sections noted starboard aft. Storage locker starboard aft with expanded metal hinged doors; rear access starboard of centerline aft. Ladders descend each side to the main machinery space. Day tanks outboard each side; vented above deck. Shorepower transformer is to port. Exhaust system is well insulated with some soot staining evident at joints and seams; apparent leaking

Engine room: Decks covered in aluminum checker plate. Fuel storage is provided forward; total 6 tanks reportedly with 29000 gallon + capacity. Fuel manifold is centerline forward. Air compressors are starboard forward along with an air reservoir that is finished in primer (possibly recent installation). Fuel inlet to starboard outboard behind the vertical air tank appears to be leaking at a welded joint.
Water system components are port forward. Waste system holding tank is outboard port side; slung from overhead. Various piping, heat exchangers and filters are located port side. Main seawater intakes with seachests each side, valved. Generators are to starboard, both with electric start. Batteries are located in a tub/box under the starboard access stairway. A smaller 6 volt bank of 2 batteries is outboard to starboard tucker between the hull frames atop the bilge stringer, with trickle charger adjacent. Main electrical panels are outboard to starboard. Belt frame is aft, with documentation number

affixed. Lube oil tanks are provided each side aft; port tank appears to leak and may be obsolete. Capstan motor is slung overhead starboard aft. Dual steering motors are port aft atop the hydraulic reservoir with some leaks at line connections under deck port aft. Fire pump is to port forward with valved intake at main sea chest. Work benches are provided port side and starboard aft.
The main engine appears to be well mounted atop a substantial foundation, no shifting indicated. Engine shows normal oil leaks and no apparent water leaks. Shaft extends aft through an alley in the rear bulkhead flanked by tankage. Slight leak is indicated at the rear shaft seal.
Hull shell plating and reinforcement appear serviceable as available. Forward bulkhead is indented 5 above the lower tank top port side, with some additional distortions of shell plating and framing noted extending aft through the compartment. Starboard side shell framing shows slight distortions from a reinforced frame aft of the forward bulkhead to the next reinforced shell frame behind the main A/C ship/shore power selection box. A leak was apparent at the tank port side aft just inboard of the hull shell plating, adjacent to the keel cooler. Another leak was noted starboard aft at the tank starboard outboard of the shaft alley outboard of the rear shaft seal; in way of apparent past repairs. Overall; shell plating and framing appear serviceable. Bilges were foul and oily.

Aft bilge: No access is provided aft save in way of tankage with dogged hatches at the aft deck. Tanks aft were drained partly for examination and shell plating and framing appeared serviceable overall. No access is available to the aft bilge compartment in way of steering apparatus and the rudder stock.

SURVEYOR'S NOTES AND REMARKS

1. Our inspection was limited as to time and scope, being non-destructive only with no disassembly for examinations behind ceilings or inside closed/sealed or locked tanks or compartments. Bilge inspection was limited and no plans were available for review to document hull compartmentalization. No tanks were entered; no disassemblies were undertaken and no hull thickness measurements were made to confirm shell plating thicknesses and extent of deterioration. Documentation card was found aboard and reviewed describing vessel overall dimensions. No other vessel construction or service history was provided.
2. A brief operational test was undertaken on the Cape Fear River during the course of our inspection. Generators cranked easily and ran smoothly under loads. Main engine operated successfully, with exceptions noted; excessive vibrations underway at higher RPM and excessive slop indicated at steering apparatus/linkage; mostly attributed to wear at the knuckles securing the hydraulic rams at the welded stands/brackets and at the tiller arm attached to the rudder stock.
3. Subject vessel shows normal wear and tear but appears to be in good overall condition; considered serviceable for reported intended use as an uninspected offshore towing vessel when properly outfitted and equipped and under competent command.
4. Exceptions noted at survey are recommended attended as follows:

RECOMMENDATIONS

- Crop and new deteriorated gunwale/waist at the weather deck bow through stern quarter bitts, including forward quarter bitts.
- Repair loose grabrail port cabin side and replace missing grabrail sections starboard aft alongside the main cabin.
- Repair deteriorated door flanges at the cabin doors each side as well as blistered rust at the wheelhouse forward window openings. Replace rubber gaskets at wheelhouse window glazing.
- Treat the rusty starboard forward fire axe to assure operational capability when necessary.
- Remove the line rack and attend hydraulic steering rams and foundations; replace steering pins and/or knuckles and securing pins. Secure loose piping along the port waist 9 subject to hammering when steering is engaged).
- Replace 1 missing tire fender starboard side.
- Resecure the loose keeper atop the galley range.
- Service the fixed carbon dioxide fire extinguisher system as well as all portable extinguishers as required annually.
- Service the EPIRB as per required interval.
- Service the strobe lights at the bridge deck ring buoys (1 tested inoperable, 1 stays on when upturned).
- Provide additional safety equipment aboard as required by regulations and/or as befitting the vessel intended service.
- Provide ground tackle aboard and spare as necessary for intended purpose and sea and anchoring conditions.
- Eliminate wire nuts at the heat pump thermostat control overhead at the forepeak companionway; utilize terminal strip and ring terminals instead; with protective cover.
- Resecure the loose lighting junction box at the rear signal mast atop the bridge deck.
- Repair the wasted light board behind the port running light atop the wheelhouse.
- Replace the missing light fixture at the foremast atop the wheelhouse.
- Repair the foremast noted wasted and distorted in way of the lower step.
- Replace broken/missing wiring clips securing lighting and antennae cables atop the wheelhouse.
- Secure wiring under the wheelhouse dash/console in neat orderly runs assuring all Dc circuits are provided adequate over-current protection. Eliminate extraneous wiring connections direct to the DC batteries (under the wheelhouse console/helm, as well as at the machinery space), with the use or terminal strips or fuse blocks.
- Seal the forward bilge compartment under the accommodations to avoid flooding the floor via ballast in heavy sea conditions. Repair soft/deteriorated decking adjacent to the bilge/tank access hatch opening.
- Secure the loose a/c condensate drain starboard side at the forepeak access ladder.

- Attend apparent leak at the main engine exhaust stack; remove insulations and examine exhaust system and repair/replace deteriorated or damaged components as determined necessary.
- Haul vessel for bottom examination and inspections of running gear notably due to heavy vibrations noted underway under leaded conditions. Consider dropping the propeller and drawing the shaft for close examinations and attention as necessary as well removal and examination of the rudder and all associated linkages (see above) and attention as necessary.
- Attend leak at the aft tanks port aft of the keel cooler at the engine room aft bulkhead and to starboard at the aft bulkhead at the shaft alley outboard of the shaft seal.
- Clean bilges of oil residue and dispose of slops properly ashore. Open framing and tanks and all other compartments and examine all available shell framing and plating for deteriorations and attend as necessary.
- Attend heavily rusted green plumbing joint at the rawwater pump port side forward in the machinery space.
- Attend leak at bilge plumbing port forward at the engine compartment forward bulkhead.
- Clean and examine the pipe joint at the fuel plumbing starboard forward outboard of the air reservoir; pressurize to test for leaks and attend as necessary.
- Attend oil leaks at both generator engines. Secure generator wiring against chafe and damage.
- Repair the loose mounting foundation under the crankcase vent fan atop the engine port aft.
- Attend hydraulic steering system line leak port outboard aft at the engine compartment.
- Repair/replace the starboard lube oil tank, noted apparently leaking at the cradle and outlet plumbing connections.

VALUATION

It is the undersigned surveyor's opinion that subject vessel, as equipped, and with the above recommendations attended, has a PRESENT DAY VALUE OF [redacted]

Issued without prejudice and strictly for the benefit of whom it may concern.

Respectfully submitted:

T. F. Wright, CMS-NAMS, AMS-SAMS