# WELCH MARINE SURVEYING

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## INSURANCE RISK EVALUATION REPORT

*This is not a Purchase & Sale Survey Report*

**Date: May 19, 2003**

**VESSEL NAME:** GREAT BEAR (MEREVAN, as evaluated)

**REGISTRATION NO:** ME 10XJN
**HULL IDENTIFICATION NO. (HIN):** Not found.

**BUILDER PER THE BUILDER'S PLATE:** Grampian Marine, Oakville, Ontario, Canada; Builder's hull no. 30205
**TYPE:** Grampian 30 aux. fiberglass sloop
**L.O.A:** 29' 9" **L.W.L:** 25' 6" **BEAM:** 9' 6" **DRAFT:** 4' 8"
**YEAR:** Reported 1973
**ESTIMATED VALUE:** Approximately $14,500

**OWNER:** Mr. W. Taylor Vaughan III
**ADDRESS:** 151 Searsmont Road
Appleton, Maine 04862
**TELEPHONE:** 207-785-5511

**DATE EVALUATED:** May 16, 2003
**EVALUATED AT REQUEST OF CLIENT:** Mr. W. Taylor Vaughan III
**EVALUATED AT:** 151 Searsmont Road, Appleton, Maine
**STATE OF VESSEL:** Winter stored outdoors, mast unstepped and stored indoors, systems decommissioned.

### GENERAL DESCRIPTION

GREAT BEAR had been "brought back" over the past year and was in good to very good condition except for some of the balsa core in her deck, cabin trunk top and cockpit. She had been thoroughly cleaned out and most of her interior and exterior finishes had been improved or redone. Her stowage lockers had been painted out wherever accessible. She was rewired and replumbed, all new materials were of good quality and were marine grade. Current applicable recommended standards of NFPA 302 and ABYC had been followed where practicable. The work was well done.

The design and construction of this vessel lend her well to day sailing and coastal cruising. She should also be suitable for limited offshore cruising, such as between New England and Nova Scotia, during the normal sailing season for the waters she transits. If handled with the skill and knowledge and prudence that common seamanship requires, and if equipped appropriately for her intended usage, and if maintained properly and well, she should be a safe and sound vessel.

Problems mentioned in this report are **in no way** intended to present a poor impression of the vessel or to detract from her value. They are mostly problems that would be normal for a vessel for her age and type. They are communicated in this report as a professional service and obligation to the client who requested this evaluation and report and they are communicated to him for his purpose of maintaining the condition and value of the vessel as well as of keeping her safe and sound. Any problems that require attention prior to launching and rigging or immediately are stated as such. Any problems relating to this vessel as an underwriter's or financier's risk are itemized under "Recommendations" at the end of this report, and are also highlighted in the body of this report by a bullet at the left margin.

## GENERAL DESCRIPTION (CONT.)

It is the intent of this risk evaluation report to provide an unbiased report of the vessel and her equipment only as of the date and time when her evaluation was made, not prior to or subsequent to that date and time. A conscientious effort was made to evaluate the vessel by general, not detailed, visual examination. Where problems or deficiencies were found, more detailed evaluation was made as deemed needed under the circumstances prevailing. Since this report is based only on visual examination of the vessel by non-invasive and non-destructive methods of inspection and diagnosis, this evaluation and all contents of this report are not rendered or represented as a warranty or a guarantee of the performance or condition of this vessel, or of any of her machinery or equipment or systems. Defects not readily visible and not reasonably accessible for evaluation or discovery without removal of structure, sheathing, liners, joinery, fittings, tanks, machinery, and stowed equipment, gear and stores, especially without disassembling or removing those and any other barriers preventing evaluation, are not and can not be covered by this report.

The current standards and recommendations of the American Boat and Yacht Council (Standards and Recommended Practices for Small Craft) and the National Fire Protection Association (NFPA 302, Pleasure and Commercial Craft) are adhered to by this office wherever practicable and many of the observations and recommendations contained in this report are based on those standards. Copies of those standards are available from:

National Fire Protection Association
1 Batterymarch Place
Quincy, MA 02269
Tel: 1-800-344-3555

American Boat & Yacht Council, Inc.
3069 Solomon's Island Road
Edgewater, MD 21037
Tel: 410-956-1050

The observations, opinions and recommendations contained in this report constitute the entire written risk evaluation report as of its date and are intended to supplement and incorporate all prior oral or written comments and communications. If anything in this report is, in the opinion of the above named client, inconsistent with any prior communications from the undersigned, then the client must request clarification as soon as possible or else proceed at his own risk.

All of the provisions of this report are not transferable, except for the above named client's purposes of purchasing, insuring and/or financing the vessel.

***This Insurance Risk Evaluation Report is not a Purchase and Sale Survey Report, and it is not to be construed as such, or represented as such, or used for any such purposes, in full or in part.***

WELCH MARINE SURVEYING

George C. Welch, NAMS - CMS

Member:
National Association of Marine Surveyors, Inc.
American Boat & Yacht Council, Inc.

## CONSTRUCTION

***HULL:***

**Material:** Laminated fiberglass, hand lay-up in female mold.
**Core:** None in the hull. **Finish:** Gel coat looked original. Boot top and bottom were brush painted.
**Color:** Topsides, white; Cove stripe, yellow; Boot top, red; Bottom, blue.
**Condition of finishes:** Good. The topsides had been cleaned and compounded and were remarkably good for its age. Paints were new, applications were good.
**Construction details:** One piece hull of solid laminate was reinforced by fiberglass tabbing structural bulkheads and partitions, and berth and shelf and sole flats to the inside of the hull. Where evaluated these secondary bonds were in adequate to good condition, the very few small delaminations found were of no structural concern.
A full structural survey was not performed. There was no apparent reason found to recommend that this be done.
**Sounding:** The hull was percussion sounded in selected areas with a small plastic headed hammer for voids, delaminations, and other defects that would be audibly detectable. No problem was found.
**Moisture meter testing:** Not done. The vessel reportedly had not been in the water for at least two years. There were no signs of osmotic blistering found by visual or sounding methods, and without removing bottom paint.

***DECK, SUPERSTRUCTURE and COCKPIT:***

**Material:** Laminated fiberglass, female mold construction.
**Core:** End grain balsa block.
**Finish:** Original gel coat. Teak was varnished or similar.
**Colors:** White.
**Condition of finishes:** Gel coat was fair to good. Teak will need to be stripped and revarnished or left bare for best appearance.
**Construction details:** The deck, cabin trunk and cockpit were molded as one unit. Large horizontal surfaces were balsa cored for panel rigidity. Structural bulkheads were tabbed to the undersides of the deck forward and aft. A one-piece molded fiberglass headliner was installed throughout the length of the accommodations and extended outboard almost to the hull, making it impossible to evaluate the undersides of the deck, etc.
**Deck-to-hull joint:** The deck edge lapped onto an internal hull flange and was sealed, bonded and mechanically fastened together. No problem was found.
**Sounding:** Cored horizontal surfaces were percussion sounded with a light plastic headed hammer for voids, delaminations, core deterioration, and other defects that would be audibly detectable. There was core delamination and deterioration found in the deck, cabin trunk top and cockpit. While these delaminations did not seriously compromise the structural integrity of the vessel or her safety in normal usage, they certainly diminish her fair market value. The condition will only worsen and become a structural and safety problem eventually, but that will take more than just a few years.
**Rails:** Extruded aluminum, thru-bolted to the hull-deck joint every 6". Toe rails and their installation were good.
**Chocks and cleats:** Mooring and stern cleats were adequately sized to the vessel and appeared adequately installed. All were cast aluminum four hole type.
**Stemhead fitting:** Cast aluminum, included bow chocks. The headstay chainplate was separate, stainless steel flatbar bolted to the fiberglass hull and to the aluminum stemhead fitting.
**Portlights and windows:** Plexiglas or similar fixed ports with aluminum finishing rings, and one opening port of cast aluminum. Fixed ports all had new plexiglas and were recently sealed.
**Hatches:** Companionway sliding hatch and drop boards, and two hinged hatches over the accommodations all appeared sound. Locking devices were adequate for normal port security.
**Cockpit seats:** Integrally molded port and starboard, with hinged fiberglass hatches fitted with padlock hasps, all good. At the companionway threshold a main sheet traveler was installed that did not appear to be its original location as designed.
- This installation should have a backing plate installed on the underside of the threshold.

**Cockpit sole:** Integrally molded.
**Cockpit coamings:** Integrally molded, no teak cappings.

***MAST STEP:***
**Step:** Extruded aluminum channel bar on the cabin trunk top, spanned the structural bulkheads underneath.
**Foundation:** The molded fiberglass headliner included an integrally molded arch under where the mast heel stepped on the channel. The structural bulkhead added support to this arch. There were no signs found of any shift or movement.

***BALLAST:***
**Material:** External, reported cast lead. Paint was new so no probing was done to ascertain this.
**Bolts:** Stainless steel.
**Fairness:** Good, no visible sign found of grounding damage or deformation.

***CHAINPLATES:***
**Material:** Stainless steel flatbar.
**Bolts:** Stainless steel.
**Bolted to:** Structural bulkheads and vertical fiberglass chainplate flanges.
**Shift:** None found on deck. The chainplate installations were mostly not readily accessible for close evaluation.

***STEERING GEAR:***
Tiller steered, with tiller built of wood and attached to the rudder stock head by a cast bronze fitting on the rudder stock head and aluminum straps on the tiller.

***RUDDER:***
**Stock:** Not accessible.
**Blade material and core:** Spade rudder was fiberglass, core could not be identified.
**Sounding:** Done per the hull, no problem was apparent.
**Gudgeons and pintles, and heel fitting:** None.
**Fastenings:** None.
**Rudderport:** None, fiberglass pipe ran between the hull and the cockpit sole. It was not fully accessible for evaluation.

## MACHINERY and PROPULSION SYSTEMS

***ENGINE:***
**Make and model:** Universal Atomic Four gasoline engine, sea water cooled.
**Serial number:** 190548
**Year of manufacture:** Pre 1976, probably original.
**Hours:** No meter.

***GENERAL CONDITIONS FOUND:***
**Appearances:** The engine reportedly had been rebuilt this past winter, including new crank shaft, bearings, seals and all gaskets.
**Test run:** Did not do.
**Paint:** New, very good.
**Oil leaks:** None.
**Fuel leaks:** None.
**Coolant leaks:** None.
**Wiring:** New.
**Plumbing:** New.
**Drip pan:** None. The bilge was very clean under the engine.

***RAW WATER STRAINER:***
**Type:** Bronze thru-hull strainer installed outside. There was no sea strainer, per se.

***BEDS:***
**Material:** Molded laminated fiberglass, fiberglass tabbed to the inside of the hull.
**Engine mounts:** Hard mounted on the engine block mount flanges.

***CARBURETOR and FLAME ARRESTOR:***
Reported had been disassembled and cleaned during engine overhaul. Externals were very clean.

***EXHAUST SYSTEM:***
**Riser:** Steel pipe dry exhaust was insulation lagged. Raw cooling water was injected into the exhaust system at the aft end of the dry section.
**Muffler:** Vernay waterlift muffler.
**Hoses:** Laminated synthetic rubber wet exhaust hose appeared serviceable.
**Hose runs:** A high loop was installed in the cockpit port locker to prevent se water back-flow.
**Connections:** Double hose clamped.
**Thru-hull fitting:** In the transom.
**Siphon breaker:** Installed under the companionway threshold.
++++ This system configuration and installation requires the exhaust pressure of a *running* engine to expel the cooling water from the muffler and hoses. If the engine's starter is run long enough, even intermittently, without starting the engine such as in hard starting situations, the engine's raw water pump will also be running at the same time. In so doing, it can be possible to fill the system with sea water to the point where it will back-flow the water through the exhaust manifold and back into the cylinders. The resultant damage to the engine is obvious. This can be avoided by closing the engine raw cooling water intake seacock until immediately after the engine has caught and started. Prior to closing the seacock the engine should be turned over enough revolutions to ensure that water has run through the raw water pump so that it will not be turning in a dry state, which will damage or ruin the pump impeller.

***PROPELLER SHAFT:***
**Material:** Stainless steel.
**Diameter:** 7/8"
**Rotation:** Good, no excessive resistance or visible run-out.
**Corrosion:** None found.
**Sacrificial zinc anode:** One new collar installed.

***PROPELLER SHAFT COUPLING:***
**Type:** Solid, cast machined steel.
**Bolts:** Steel.
**Set screws:** One, with safety wire installed.

***STUFFING BOX:***
**Type:** Self-aligning type.
**Packing gland:** Bronze, reportedly will be repacked prior to launching.
**Hose and clamps:** Appeared serviceable, hose ends were double clamped.

***STERN BEARING:***
**Type:** Cutlass type shaft bearing in good condition.
**Shaft strut:** Bronze.
**Strut fastenings:** Not readily accessible for evaluation.

***PROPELLER:***
**Type:** Three blade solid type, by Federal.
**Material:** Bronze.
**Size and rotation:** 11" dia. X 5" pitch, right hand rotation.
**Condition:** Appeared good, no corrosion or deformation found.

***ENGINE CONTROLS:***
**Type:** Morse dual lever control unit.
**Operation:** Appeared normal.
**Cables:** Morse sleeved cables appeared serviceable.
**Cable connections:** Good.

***INSTRUMENT PANEL:***
**Manufacture:** Stewart Warner gauges.
**Gauges:** Ammeter, oil pressure and water temperature.
**Wiring and connections:** Appeared good.

***ENGINE COMPARTMENT and BILGE VENTILATION:***
**Blower:** Marine type ignition protected blower.
**Test:** Not done.
**Air intake vent and duct:** Clamshell vent on the outside of the cockpit coaming port side, with 4" flexible vent ducting.
**Air discharge vent and duct:** Same, on the starboard side.

## FUEL SYSTEM

***FUELTANK:***
**Location:** Below the cockpit starboard seat.
**Material:** Welded aluminum.
**Capacity:** Did not measure.
**Connections:** All were to the tank top.
**Foundations and hold-downs:** Plywood, appeared serviceable.

***FUEL FILL and VENT:***
**Fill plate and location:** Outside the cockpit starboard coaming.
**Fill hose and clamps:** Trident, USCG type A2, new, double clamped.
**Vent hose and clamps:** Type B1 fuel hose.
**Vent hose runs and outlet:** Outlet in the top of the transom was missing its screen.
- Install a screen or loose wad of bronze wool inside the fuel tank vent outlet.

***FUEL FILL and TANK GROUNDING:***
**Wire size:** #14 awg insulated stranded copper from the tank to the engine. The deck fill plate was not grounded.
**Connections:** Insulated crimped type.
**Ground point:** The common ground bus, which connected to the engine, shaft and prop, and to the ground plates.
- Ground the fuel fill deck plate. Use #8 awg for the grounding conductors.

***FUEL PIPING:***
**Materials:** Copper tube with flared connections, and USCG type B1 short length of hose from the primary filter to the mechanical fuel lift pump.
**Hose and piping runs:** Appeared adequate.
**Connections:** No leaks were evident.

***FUEL FILTERS:***
**Primary:** Napa with replaceable element.
**Secondary:** On the engine.
**Other:** None.

***FUEL SHUT-OFF VALVE:***
**Type:** Packless type brass cock valve.
**Location:** At the tank supply connection.
**Access:** Good.
**Operation:** Normal.

## BILGE and WASTE DISCHARGE SYSTEMS

***GENERAL:***
The system was decommissioned and could not be tested. Only visual evaluation of the system was made, without running or activating any of the components.

***BILGE PUMPS:***
**Manual:** Whale Gusher-10.
**Electric:** Rule 800
**Automatic switch:** Rule float switch.
**Circuit protection:** Fused.

***PUMP DISCHARGES:***
**Materials:** Whale pump hose was light duty, fragile corrugated plastic. Rule hose was laminated synthetic rubber. Corrugated hose breaks and splits very easily and should not be used in bilge pump installations, especially ones where the hose will be handled.
- Replace the corrugated hose with heavier duty better quality hose.

**Hose runs:** Rule pump had a high loop to try to prevent back-flow. The whale pump discharge hose was long, coiled in the cockpit locker, and would be led over the rail when used.
**Siphon breakers:** In the Rule pump discharge.

***TOILET:***
**Manufacture:** Wilcox “Head Mate.”
**Operation:** Manual.
**Discharge:** Direct overboard or to a holding tank.

***SEWERAGE SYSTEM:***
**Treatment system:** None.
**Holding tank:** Polyethylene, new.
**Hoses:** Plastic sanitation type.
**Selector valve:** One installed.
**Pump:** Whale diaphragm type.

***SCUPPERS:***
**Deck:** One each side, each plumbed to a seacock and thru-hull fitting above the flotation waterline.
**Cockpit:** Two, plumbed to drains out the transom, above the flotation waterline.

***SEACOCKS:***
**Type:** Ball type, one gate valve.
**Materials:** Bronze.
**Access and operation:** All good.
**Thru-hull fittings:** Bronze.

## DC ELECTRICAL SYSTEM

***GENERAL:***
Only visual evaluation was made without activating any of the components. The system and all of its components and appliances should be fully tested when commissioning.

***BATTERY BANKS:***
**Manufacture and quantity:** Two 12 volt lead-acid group 24, by or for New Holland. Both were new.
**Boxes & foundations:** Plastic boxes with lids were well installed on a shelf
**Hold-downs:** Straps.

***CHARGING SYSTEM & CABLES:***
**Wire type & size:** #2 battery cables of insulated stranded copper.
**Connections:** Swaged rings with heat shrink, new.
**Wire runs:** Good, short runs in the primary system.
**Alternator & belt:** Engine mounted, not ignition protected. When this alternator is to be replaced, use a marine grade ignition protected unit.

***BATTERY SWITCH:***
**Type:** Rotary battery bank selector switch.
**Operation:** Appeared normal.
**Connections:** Not readily accessible.

***CIRCUIT PROTECTION:***
**Panel:** Fuse blocks for Buss or similar fuses.
**Branch circuit protection:** Twelve circuits were wired through the battery switch. Two fused branch circuits, for the bilge pump and AM-FM radio memory, were hard wired.

***WIRING:***
**Type & Size(s):** Two conductor boat cable and individual conductors were almost all new.
**Connectors:** Insulated crimped connectors were almost all new.
**Runs:** Adequately routed and secured.

***GROUNDING & BONDING:***
**DC electrical system ground:** System was negative ground to the engine and propeller and to a pair of ground plates.
**Lightning grounding:** Not evaluated.
**Common ground point:** A common ground bus was installed in the engine compartment and was connected to the engine and to the ground plates.
**Ground plate:** Two installed, both were solid bronze plate.

***LIGHTS:***
None were tested, only externally visually evaluated. All should be tested when commissioning.
**Running, port & starboard:** Installed inside the hull forward, with red and green plexiglas over them.
**Running, stern:** On the stern toe rail.
**Bow (aka "steaming"):** On the mast.
**Masthead:** White anchor light.
**Deck flood:** Integral in the bow light.
**Emergency & auxiliary lighting:** Not aboard.

***ELECTRONICS:***
None were tested, only visually evaluated and not powered up.
**VHF radio telephone:** Uniden "Solara" ser. no. 26040119. A hand-held Uniden radio telephone was also aboard.
**Depth sounder:** Datamarine model CD400, ser. no. CM11783.
**Loran:** Marinetek, model and ser. no. were not found.
**GPS:** Not on hand for evaluation.
**Automatic pilot:** Autohelm tiller drive type, ser. no. not accessible.
**AM-FM receiver:** Jensen model Mp3310, ser. no. not found, with one pair of stereo speakers.

## AC ELECTRICAL SYSTEM

***GENERAL:***
There was no AC shore power or inverter system installed.

## INTERIOR

***JOINERWORK:***
**Materials:** Teak faced plywood and solid teak trim. The accommodations were nicely built and provided all of the amenities for comfortable overnight cruising. The interior was all in good condition, neat, clean and orderly.
**Finishes:** Wood was oiled or similar. Countertops were Formica or similar. The molded fiberglass headliner was gel coat finished. The finishes were neat, clean and in good condition.

***HARDWARE & FITTINGS:***
Brass or bronze and stainless steel, all serviceable.

***CABIN SOLE:***
Fir or similar plywood, painted and carpet covered.

***LOCKERS & STORAGE AREAS:***
All were neat and clean, and had been painted during the past winter.

***BILGE:***
Very clean.

***GALLEY STOVE SYSTEM:***

For reasons of liability, this office will not light a stove or heating appliance to test it. This should be done by the owner or his designated agent. Testing should be done during commissioning, and fully charged and recently inspected fire extinguishers should be on hand and readily accessible.
**Fuel:** Liquefied petroleum gas (LPG).
The system could not be pressure tested because there was no tank connected. This should be done at least monthly during the boating season.
**Stove:** Kenyon Homestrand model 219 countertop stove was clean and appeared serviceable.
**Fuel piping:** Copper tube with flared connection fittings, with no intermediate connections inside the vessel.
**Fuel tank:** Not on hand.
**Tank( installation:** The tank will install on the cabin trunk top in open air.
**Vent / drain:** Will not be necessary as described.
**Solenoid valve & switch:** None, not needed as long as the tank manual valve is used.
**Regulator and gauge:** New units were installed.

## SPARS & RIGGING & FITTINGS

***GENERAL:***

The mast was stored on a rack with its rigging bound and tied securely to it, so this inspection was limited by lack of access. Inspection was made as best as could be done under the circumstances prevailing at the time. When the mast is out for preparation to rig and step it should be inspected then, and this inspection can be made by a professional, competent yacht rigger or by a knowledgeable owner.

***MAST and FITTINGS:***

**Material:** Extruded aluminum. **Finish:** None.
**Masthead assembly:** Cast aluminum cap with micarta sheaves for external halyards.
**Spreaders:** Aluminum pipe.
**Heel:** Good, no corrosion.
**Fittings:** Aluminum and stainless steel.
**Wiring:** Could not fully evaluate, appeared good at the mast heel.

***BOOM and FITTINGS:***

**Material:** Extruded aluminum. **Finish:** None.
**Gooseneck:** Aluminum unit originally designed for roller reefing. Roller reeefing will not be possible because of the fittings retro-fitted on the boom.
**Bales:** The boom end sheet and topping lift swiveling connection strap had been removed and a stainless steel bale was installed farther forward to accommodate the new traveler's location at the companionway threshold.
**Fittings:** Cheek blocks and eyes, of aluminum and stainless steel.

***STANDING RIGGING:***

**Material:** Stainless steel 1 x 19 strand wire could not be fully evaluated.
**End fittings:** Stainless steel swaged sleeves, marine eye upper ends and turnbuckle stud lower ends.
**Turnbuckles:** Forged bronze open body type.
**Toggles:** Stainless steel strap type.

***RUNNING RIGGING:***

**Material:** Dacron or similar braid.
**End fittings:** Stainless steel.

***ROLLER FURLING SYSTEM:***
**Manufacture:** Harken system.
**Extrusions:** Appeared serviceable.
**Drum:** Same.
**Halyard swivel:** Same.
**Operation:** Could not evaluate closely.

***DECK FITTINGS:***
Aluminum and stainless steel, all appeared serviceable. As described previously, the main sheet traveler installation was not as originally designed and should have a rugged backing plate installed for it underneath the companionway threshold.

***LIFELINES and PULPITS:***
**Bow & stern pulpits:** Stainless steel tube construction with socket connections. Both appeared sound, with no damages or deformations found.
**Lifeline stanchions:** Stainless steel tube, all appeared sound.
**Stanchion bases & set screws:** Cast bronze sockets appeared sound.
**Lifelines:** Plastic coated upper and lower lifelines appeared sound and not old.
**Lifeline connection fittings:** All were stainless steel, all appeared serviceable.

## SAILS

Sails were not fully evaluated. Per the owner, the inventory included main and a roller furling genoa for, plus two jibs not converted to roller furling and one older main.

## EQUIPMENT

***GROUND TACKLE:***
**Anchors:** Danforth, one 13 lb. and one 22 lb.
**Chain leaders:** One 5/16" and one 3/8", both galvanized.
**Rodes:** One _" dia., and one _" dia., both three strand.

***COMPASS:***
**Manufacture:** Aquameter bulkhead mount type.
**Location:** Beside the companionway hatch.
**General condition:** Appeared serviceable.
**Deviation card:** Not found, a search was not made for it.
++++ Every few years the compass should be swung by a competent compass adjuster, but not until all final stowage of gear, equipment, personal effects and stores is completed.

***HORN:***
One pressure can type was aboard.

***FLARES:***
A 12 g. pistol and six red meteor flares were new. There was no orange flag day signal.
- When commissioning, put aboard the required orange flag day signal.

***PERSONAL FLOTATION DEVICES:***
Not on hand. Reportedly seven adult type II and three child type II vests, and one type IV horseshoe throwable.
- When commissioning, put aboard all required USCG approved PFD's.

***FIRE EXTINGUISHERS:***
**Locations:** Engine compartment, galley and passageway.
**Manufacture:** Fireboy and Kidde.
**Type & size:** Fireboy was rated for 75 cu. ft. Kidde were type BC size 1.
**Extinguishing agent:** Fireboy was Halon 1301 with automatic discharge fitting. Kidde were manual dry chemical, both in accessibly mounted quick release brackets.
**Gauges:** On the Kidde units, both good.
**Inspection tags:** None.

***DODGER, ETC:***
**Bows & fittings:** Stainless steel tube, appeared good.
**Canvas & panels:** Blue synthetic canvas with transparent panels, all good.

***PLACARDS REQUIRED BY FEDERAL REGULATIONS:***
**Oil spill:** Posted in the main cabin.
**Plastics and rubbish disposal:** Posted in the main cbin.

***DINGHY:***
**Length:** Eight feet, pram type of plywood on solid wood and epoxy resin glued, painted. It was built for both rowing and sailing and included a sailing rig and rudder and centerboard.
**Manufacture & model:** Built by the owner over the past winter.
**HIN:** None.
**Condition:** New.

## RECOMMENDATIONS

The following recommendations relate to the vessel as an underwriters' or financiers' risk and they are listed in the order and by the headings that they appear under in this report. For more detailed descriptions, refer to the paragraphs under the headings cited below. These recommendations should be followed prior to or during commissioning, unless otherwise noted. Additional recommendations are made in the body of this report for maintenance and repairs of more general nature.

1. DECK etc.: Install a backing plate under the companionway threshold for the main sheet traveler.
2. FUEL FILL and VENT: Install flame arrestor screen or wad of bronze wool inside the tank vent outlet.
3. FUEL FILL AND TANK GROUNDING: Ground the deck fill plate. Use #8 awg conductors for the plate and tank grounding conductors.
4. PUMP DISCHARGES: Replace the hose for the manual bilge pump, use good quality laminated synthetic rubber or spiral reinforced plastic hose.
5. EQUIPMENT: Put aboard all USCG and federally required emergency and safety gear and equipment, including PFD's and the required orange flag day signal.

***** END OF REPORT *****