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## *Vessel Condition Survey*

### *M.V. "Gentle Breeze"*

*Prepared For:*

*Mr. Michael Bateman*

*Date: February 16, 2002*

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## I. INTRODUCTION.

### 1. Statement and Purpose of Survey:

*Acting at the request of Mr. Michael Bateman, the surveyor did attend onboard the 37 Ft. Wood Troller, M.V. "Gentle Breeze". Beginning on February 13, 2002 an "out-of-the-water-survey" was conducted ( whilst on a stationary travel lift) at Alberni Engineering, Alberni, BC. An inspection of the underwater machinery and the exterior of the hull's wetted surface area was performed. The ship's papers were on board and appeared to be in order including the ship's Registry or "Blue Book". A brief sea trial was performed and the vessel ran very smoothly. The reason for the survey was to ascertain the physical condition and value of the vessel. AC/DC power was not used to check operation of the electrical systems except as specified in this report only.*

### 2. General Vessel Description:

*The 37 Ft. Wood Troller is a de-commissioned fishing vessel and still rigged for said purpose. The layout includes 2 bunks and lockers in the forecabin with steps up to the wheel house. Aft of the forecabin and through the bulkhead is access to the engine room. The wheel house has the helm station to port forward followed aft by the galley counter and diesel stove. Starboard aft of the wheelhouse is the double settee which folds down to form a double berth.*

*The aft deck has raised coaming and hatch to the fish hold and followed aft by the cockpit. The rigging has an aluminum mast and stabilizer poles and a wooden boom.*

*The vessel is a "double-ender" of carvel construction with raked stem and soft chine. It has a full keel and skeg-hung steel rudder. The engine is dry exhaust with keel coolers.*

*The power package will cruise the vessel comfortably at 7 knots. The current vessel configuration is suitable for its intended purposes, fishing and pleasure cruising in protected local waters on the Pacific Coast.*

*It should be noted that the elimination of ballast in the fish hold, normally found when fully rigged and equipped as a fishing vessel, would impose some limitations as far as "sea worthy" capability in open waters.*

**II. SUMMARY & VALUATION.**

**1. Statement Of Overall Vessel Rating Condition:**

*It is the surveyor's experience that develops an opinion of the OVERALL VESSEL RATING OF CONDITION after a survey has been completed and the findings have been organized in a logical manner.*

**2. Comments and Opinions:**

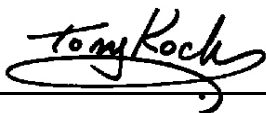
*From the examination carried out, it is the opinion of this surveyor that the vessel was well build and maintained and is in good condition, subject to noted recommendations; it is suitable for her intended purposes, fishing and pleasure cruising in protected and open waters (with consideration to ballast).*

**3. Market Valuation:**

<b>OVERALL VESSEL RATING:</b>	<b>Good</b>
<b>ESTIMATED FAIR MARKET VALUE:</b>	<b>\$16,500</b>

*Respectfully Submitted Without Prejudice.*

**KOCH Marine Services <sup>Ltd.</sup>**

Per: 

**Tony Koch, AP**  
*Marine Surveyor & Consultant*

**Statement of Limitation:**

*The information contained in this report is included, after reasonable observation and inquiry, in the belief that it is correct, but is not warranted to be correct. This survey was conducted by visual inspection only, without removal or testing or opening up to expose parts ordinarily concealed. No determination or investigation of stability, or inherent structural integrity has been made, and no opinion is expressed thereto. This is not a Certificate of Seaworthiness. Acceptance of this report constitutes agreement that no liability shall attach to this company, its surveyors or associates for any omissions or inaccuracies whatsoever.*

III. GENERAL INFORMATION.

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1. Survey Prepared For: **Mr. Michael Bateman**  
**27057 Frodesen Circle**  
**N. E. Kingston, WA, USA 98346**  
**Res:(360) 981-9123**

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2. INFORMATION SUMMARY:

NAME OF VESSEL (Official): .....	"Gentle Breeze"
TYPE OF SURVEY: .....	Condition & Valuation
YEAR/MAKE/MODEL OF VESSEL: ...	1936, 37 Ft. Wood Troller
BUILDER: .....	John Stokkeland
LOCATION: .....	New Westminister, B.C. Canada
OFFICIAL NUMBER: .....	0173486
PORT OF REGISTRY: .....	6 in 1959, Nanaimo, BC Canada
PREVIOUS REGISTRY: .....	24 in 1941, Victoria, BC Canada
HAILING PORT: .....	Alberni Commercial Basin, BC Canada
HULL TYPE: .....	Displacement
HULL MATERIAL: .....	Wood
COLOR: .....	White
COLOR STRIPE: .....	N/A
LENGTH OVERALL (LOA): .....	37 Ft. 0 In.
BEAM: .....	10 Ft. 0 In.
DRAFT: .....	5 Ft. 0 In.
GROSS TONNAGE: .....	12.28 T
REGISTERED TONNAGE: .....	8.35 T
FUEL SYSTEM: .....	Diesel, Single Screw
FUEL TANKS: .....	250 Gallons, est. (2 steel tanks)
FRESH WATER TANKS: .....	100 Gallon (1 tanks)
HOLD CAPACITY: .....	7,000 Lb.
CRUISING SPEED: .....	7 Knots
TOP SPEED: .....	9 Knots

**IV. STRUCTURAL.**

**1. General design**

*The hull and structure were examined internally and externally, as well as could be seen, without opening up of paneling or structures.*

*Vessel hull and superstructure were found to be in generally good condition. The hull, deck and superstructure has been recently painted. Some minor dents and scrapes were noted, however, this is consistent with past usage and the vessel's age.*

*No caulking or fasteners were pulled at the time of this survey, therefore no definite comment can be made as to their condition.*

*The hull and superstructure is constructed of:*

*Planking: Cedar  
Sheer Clamp 3 ½" x 4 ½"  
Frames: 1 ½" x 2 ½" oak bent frames on 9" center  
Deckhead beams (Wheelhouse): 2" x 3" on 14" center  
Deckhead beams (Forecastle): 3 ½" x 3 ¼" on 17" center  
Trunk Cabin: 3 ¼" x 3 ½" on 14" center  
Guard on hull side: Gumwood  
Cap on Bulwarks: Gumwood*

*The stem is fitted with a steel guard and has welded anode zincs.*

**2. Above Waterline**

*The hull was seen with only minor scrapes and abrasion but overall in very good condition. The vessel hull sides have been recently painted and showed in generally smooth condition. A gumwood guard is fitted along the hull sides, seen in good condition and varnished. It is reported that the vessel was re-fastened and caulked in 1992*

**3. Below Waterline**

*The wetted surface area of the hull was seen in generally good condition with no apparent wood decay and generally well secured and intact seam fillers. Anti-fowling paint was seen in serviceable condition and would be reapplied before launch; paint: "Tar & Wonson". The keel is fitted with a gumwood shoe seen in generally good condition.*

*The 3 bladed cupped bronze "Campbell" propeller, D28 x P15 LH, S/N: J6382F appeared in good condition with only a couple of very minor dents. The dents are not considered to impact performance. The external mounted shaft log and cutlass bearing appeared with only minor movement. The propeller is attached to 1½" S/S engine shaft connecting to a mild steel intermediate and steady bearing.*

*The skeg-hung rudder showed minor to moderate pitting but still in good and serviceable condition. The bushing indicated no undue movement, however, some slight side movement was indicated. This movement was not noticeable during the sea trial, however. The hydraulic ram connection to the steering quadrant should be checked for worn bushings. The hydraulic steering ram is secured behind a plywood cover in the cockpit and was not available for visual inspection. The rudder stock passes through an internal steel tube extending to just below the aft deck level where it attaches to the 360 Deg quadrant. With the quadrant partially exposed it allows for a rod to be inserted thus serving as an emergency tiller.*

## V. DECKING & SUPERSTRUCTURE

### 1. Decking & Cockpit

*Decking appeared to be in generally good condition with intact seam filler. Some small soft spots were sounded but overall, the decking showed in generally good condition.*

*The foredeck has 14" high bulwarks of stacked construction which continues to the stern with planking supported on 2" x 2" vertical frame studs. Some of the studs were noted with minor to moderate decay at the deck level and some have been strengthened with aluminum gussets. Overall, the bulwarks are still in good and serviceable condition.*

*The foredeck has a raised trunk cabin of plywood construction. This features a large escape hatch 24" x 27" with a hinged hatch and plexiglass insert. The hatch appeared in good condition with no apparent leakage to the forecabin. Some minor softness was noted around the corners of the trunk cabin, but not considered serious at this time.*

*The aft deck has raised coaming and hatch to the fish hold. A checker box spans the beam aft of the fish hold followed by the cockpit. Two triple hydraulic "Simplex" gurdies are secured on the gunwale on port and starboard side.*

*The hydraulic fittings and elbows on the deck for the gurdies and anchor winch showed some moderate corrosion. It may be prudent to service the entire hydraulic system.*

*The cockpit is recessed from the deck level and has plywood board in the sole. A shelf is fitted and secured forward and under the deck level in the cockpit. The fresh water tank is between the forward shelf and bulkhead to the fish hold. Limited access was available to the framing and planking in the cockpit. This area was covered by the shelving secured to the plywood flooring and obscured forward from the built-in water tank. The plywood flooring aft of the cockpit was removable and showed the horn timber and stern post in good condition where could be seen. Concrete ballast has been poured outboard of the keelson thus obscuring the frames attached to the keel. The last 4 or 5 oak frames forward of the stern post showed softness. These frames should be "sistered" and fastened to the planking. Externally, there were no indication of undue movement.  
*See Recommendation.**

*Steering from the cockpit is accomplished by a "Morse" engine control throttle secured on the port side gunwale forward of the gurdie. Steering is accomplished from the hand held remote wired to the autopilot at the helm station.*

**2. Superstructure**

*The superstructure is made of painted plywood over framing. Generally, the superstructure showed in good condition with only minor areas of softness noted.*

*The bulkhead has a hinged "Dutch" door giving access to the wheelhouse. All windows are hardened glass in wood framing. The wheelhouse has 5 opening windows which drops down inside the framing and consist of the two forward side windows, the side above the settee and galley area and the aft bulkhead. The small opening window at the helm showed a minor crack in to top forward corner.*

*The cabin top supports the exhaust stacks for the engine and stove, seen well shielded, as well as the radar dome and spot light. The cabin top did not indicate any undue softness.*

**3. Rigging**

*The aluminum 4½" mast assembly with aluminum spreader, 3" stabilizer poles and 5" wood boom, appeared in generally good condition and well secured. The mast is secured with 7/16" galvanized wires, chain and turnbuckles on the forestay and shrouds. The shrouds are attached to external chain plates secured on the hull sides. These were noted with moderate corrosion and should be monitored.*

## VI. INTERNAL VESSEL LAYOUT & ACCOMMODATIONS.

### 1. General Quarters

*The forecastle is fitted with two bunks to starboard and bench to port, both with stowage below. Aft of the bunks on starboard side is a "Brydon" manual head secured to the floor. At this time the head is not functional. The head in and discharge for the head has through hulls and valves installed on the hull side behind the head, however, they have been capped with planking on the outside of the hull. Further, if made operational, the valves were found seized and would need to be serviced or replaced prior to use.*

*The forecastle hull sides have been sheathed with painted planking giving limited access to the hull side and framing. The forefoot and stem appeared in good condition with no indication of seepage or decay where could be seen. Some minor corrosion was seeping from a few fasteners but overall give no indication of any major problem. There was no indication of leakage from the sheer clamp, deckhead planking and escape hatch. Removable steps on the forecastle bulkhead leads up the wheelhouse.*

*The wheelhouse has the steering position, 18" wooden wheel and fixed helm seat to port. The helm station has full engine instrumentation and electronics as noted.*

*Starboard aft of the wheelhouse is the double settee and pedestal table which drops down to form a double berth. The settee is on a raised platform with drawer below. A hinged chart table is secured to the deckhead above the settee.*

*The galley counter and diesel stove is aft of the helm seat. The diesel stove was seen well shielded against the hull side and bulkhead as well as the stack through the deckhead. The counter has a S/S sink with a hand pump. Stowage and drawers are fitted under the counter. Hot water is supplied from a 5 gallon "solar" plastic bladder bag located in the engine room. The bag is interconnected to the "Jabsco" diaphragm pump. The bag is heated when the engine is running and heating the engine room and water bag at the same time. A hose is fitted to the aft deck bulkhead allowing for a hot shower.*

*The seating in the wheelhouse has a mixture of vinyl and fabric covered cushions. The hull sides are fully paneled and the sole has a one linoleum cover.*

**2. Engine Compartment**

*The engine compartment is accessed from a hatch in forecastle bulkhead and is located under the wheelhouse. The engine room has limited room and access around the engine. The bilge below the engine was seen moderately soiled and should be properly cleaned.*

*See Recommendation*

**3. Fish Hold.**

*The hold is fully fiberglassed over foam and divided into 5 sections with wooden pen board. A plywood cover is secured over the engine shaft running longitudinally through the fish hold. A small plywood hatch 4" x 10" gives access to the steady bearing. Overall, the hold appeared in generally good condition. Some corrosion seepage through the foam was noted. This appeared to be from the external chain plates bolted to the hull sides for the shrouds. It may be prudent to remove the foam in these area and inspect the bolts and frames.*

**VII. SYSTEMS.**

**1. Propulsion Machinery**

*Perkins Model C-130 S/N: 354U5398 (new 1968) Hours: N/A*

*Cyl: 6 HP: 130 Gear: Capital HDEC-8900 Ratio: N/A*

*Engine Shaft: 1½" S/S with mild steel intermediate Exhaust Type : Dry*

*Engine Cooling: Fresh Water via keel coolers (2 runs) Ventilation: Natural*

*The engine exhaust pipe was seen with moderate corrosion in the flanges and bolts. The muffler is shielded behind the funnel encased through the wheelhouse bulkhead and not available for inspection. The exhaust pipe is not lagged, where could be seen, and may be a preferable addition. It is recommended that the exhaust system be fully exposed and checked for proper operation and potential leakage of exhaust fumes.*

*See Recommendation.*

*The engine was seen in fair to good condition. The engine could do with a good clean up.*

*A cold start of the engine indicated heavy smoke in the exhaust initially. Once the engine got warm, the smoke appeared to be minor. Oil pressure on start up indicated 50 Lb. and dropped to 40 Lb. after the engine heated up. It is suspected that the engine has extended hours and will require some service over the next few hundred hours. A "warm" oil sample was taken from the engine, after the sea trial, and will be reported separately from this report, once it becomes available.*

*The engine mounting assembly and bolts appear to be in generally good condition but indicated some minor corrosion.*

*The engine was not run or tested any further, therefore, no comments will be made as to its internal condition.*

**2. Engine controls and steering.**

*The engine controls are by way of rod and cable control to the engine. The vessel is equipped with a single steering position. The hydraulic fittings behind the helm station noted some minor leakage and should be checked.*

*See Recommendation*

*Steering from the cockpit can be done with dual "Morse" control throttle lever (note: the shift lever is not connected) and the remote handheld unit wired to*

*the main autopilot at the helm.*

3. **Fuel Systems.**

*The main engine is supplied by way of 2 fuel tanks (mild steel) secured outboard aft in the engine room. The tanks, where could seen, appeared in generally good condition with only minor to moderate surface corrosion. No access is available above, below and outboard of the tanks, therefore, no comment can be made as to overall condition.*

*The fuel line is interconnected with a "Racor" Model: 500FG external fuel filter.*

4. **Electrical Systems and devices.**

<u>Description</u>	<u>Model/ Serial Number</u>	<u>Tested</u>
VHF Radio	"Seasport" Model: 1080K	OK
VHF Radio	"Modar"	OK
Sounder	"Furuno" Model FWL501, S/N: 86017530	OK
Radar	"Furuno" Model 1730, S/N: 2333-3609	Ok
CB Radio	"Realistic" Model: TRC-45	OK
Autopilot	"Comnav" 1001 with remote, new 1993	OK
Loran-C	LC-90 Mark II	OK
Search Light	remote manual from helm station	
Wiper (1)	Center helm window	
Deck Work lights	On boom & fore and bulkhead	
Battery Charger	Portable	
Fresh water Pump"	"Jabsco" diaphragm, Engine room	
Bilge Pumps	"Rule" 2000 w/ FS in Fisk Hold "Rule" 2000 in Engine room, manual only	

*The following electrical systems/supply are installed:*

- 1 - 4D Heavy Duty battery                      Starting    E/R starboard forward  
2- 6 V Golf cart batteries (crossed to 12 V), House    E/R starboard forward

*Wiring and breaker boxes were seen disorganized. It would be prudent to organize, label and properly secure all the wiring.*

*See Recommendation*

5. **Ground tackle.**

*The foredeck is fitted with an aluminum hydraulic anchor winch and drum containing 10 Ft. of ½" chain, 60 Ft. of 3/8" chain and 300 Ft. of 5/8" Double braided line attached to the 75 Lb. "Ostrom" anchor secured through the stem head. The anchor chain was seen some minor to moderate surface corrosion. It would be prudent to pull and check all of the anchor rode and replace as necessary.*

6. **Safety Equipment.**

<u>Description</u>	<u>Model/Serial #.</u>
<i>Compass</i>	<i>"Dirigo" 6", connected to autopilot</i>
<i>Life Ring</i>	<i>30", located on starboard cabin side</i>
<i>Fire Extinguisher</i>	<i>2½ Lb. Dry Chem (Dated Mar 98), Wheelhouse</i>
<i>Fire Extinguisher</i>	<i>5 Lb. Dry Chem (Dated Jun 99), Forecastle</i>
<i>Dinghy</i>	<i>"Sportyak III" with 2 wooden oars</i>
<i>Fenders</i>	<i>3 Scotchman</i>

**VIII. RECOMMENDATION.**

*(In order of priority)*

1. *The engine room bilge should be cleaned.*
2. *The hull side frames in the cockpit should be sistered.*
3. *The engine exhaust pipe should be checked.*
4. *The hydraulic fittings at the helm station should be checked.*
5. *The electrical wiring should be checked and properly secured.*
6. *It is the owner's (operator's) responsibility to upgrade and maintain minimum required safety equipment to current Canadian Coast Guard Standards i.e. Flares, PFD's, Fire Ext. etc.*

**IX. PICTURES.**

*The following 26 Pictures form part of this survey:*



*Figure 1 Vessel overall, looking starboard aft*



*Figure 2 Wheelhouse bulkhead overall*

## X. TERMINOLOGY & REFERENCES.

a. **Corrosion:**

*The following terminology and definitions are used in this report:*

**Erosion:** *A mechanical corrosion caused by friction.*

**Electro-Chemical:** *A corrosion caused by the difference in current charge between dissimilar metals (scale of nobility). When two material have a sufficiently different charge (be it positive or negative), then a flow of current (electrons) will occur.*

**Galvanism:** *The term applied to the flow of electrons when two dissimilar metals are joined. In a dry condition little or nothing will happen, but add water which becomes a conductor and corrosion will blossom.*

**Electrolysis:** *The simple result of stray current, and nothing else. Often used as a "Catch all" to describe any kind of corrosion.*

**Crevice Corrosion:** *This involves water, metals and crevices while at the same time reducing or eliminating air exposure. Crevice corrosion is the same thing as galvanism, only it occurs under different circumstance. Briefly, the water/metal interface oxidizes and turns the water into acid. This changes the electrical makeup of affected metals, generating an electrical current that "dissolves" the metals involved. It is most commonly observed in thru-hull fitting leaching rust.*

**Stress Corrosion:** *This occurs when metals are under heavy stress. This is a combination of crevice corrosion cells combined with heavy loading. It most often occurs in sail boat rigging and power boat propeller shafts. All it takes is for a tiny pit to form on a shaft to initiate the crevice/stress corrosion cycle that will ultimately result in fatigue failure.*