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ANNEX A – VALUATION

**GENERAL**

The following is a report on a survey conducted by Stephen W. Leake (Surveyor).  
 The survey was requested by Yves Tessier (Client).  
 The object of the survey was to ascertain the general condition of the vessel for sale and insurance purposes.

This report represents the educated opinion of the Surveyor, made without prejudice and subject to the condition of the vessel being ascertained from a general inspection while ashore without removing equipment or opening parts normally concealed, testing for tightness, operating machinery or systems unless specifically noted.

The contents of this report are for the consideration of the Client and the Client's insurance company only. The contents of the report remain the intellectual property of SWL CONSULTANTS. Neither the Client nor SWL CONSULTANTS shall re-sell the survey report without mutual consent.

This report and its content are valid only when complete with all pages including annexes and cover page signed by the Surveyor, and account in good standing. Use of this report by the Client or any third party, serves as acknowledgement of these provisions.

**STANDARDS**

The subject vessel has been surveyed for compliance where applicable with the following regulations and standards under the Canada Shipping Act:  
 TP1332 Construction Standards for Small Vessels  
 Small Vessel Regulations  
 Collision Regulations  
 Sewage Pollution Prevention Regulations

**SURVEY PARTICULARS**

Date attended: 2005  
 Location: Greece's Point, Quebec, Canada.  
 Conditions: Dry, clear, light breeze, 25°C. Boat outside, ashore on launch cradle.  
 In attendance: Surveyor and Client

**VESSEL PARTICULARS**

Name (Registered): Capt. Felix  
 Builder: Russel Brothers  
 Model: Commercial Diesel tug (converted for recreational use)  
 Year: 1955  
 Hull Identification Number (HIN): ZZZYT0020305  
 Registration Number: 198452  
 Port of Registry: Quebec City.  
 Gross Registered Tonnage: 8.51  
 Net Registered Tonnage: 5.79  
 Single Vessel Label: Yes.  
 Length: stem to rudder stock 33' – 0"  
           Overall 35' – 6"  
 Beam: 10' – 0"  
 Depth: 4' – 6" (1.37m)  
 Draft: 4' – 2" aft, (measured from underside of keel to marked waterline)  
           3' – 4" forward (measured from underside of keel to marked waterline)  
 Propulsion: Single inboard diesel.  
 Auxiliaries: None.

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**VESSEL DESCRIPTION**

Vessel was built as a commercial diesel tug. Hull is full bodied displacement type with plumb stem, round bilge, elliptical counter stern.

Flush aft and side decks with a break forward with a higher foredeck.  
Central deckhouse over machinery space and elevated pilothouse forward.

Below decks from forward, chain locker, forward cabin with side berths for two and a galley, machinery space, lazarette.

**CONSTRUCTION**

All steel construction.

Hull plating: 1/4" below waterline, pitted and with various indentations commensurate with age and former use.  
3/16" above with various indentations commensurate with age and former use, some of which have been metal filled and faired. Plating around the counter stern renewed.  
All sound and watertight.

Hull frames: 2.5 x 5/16" FB (FlatBar) at 15" centres. All sound  
Floors: 12" deep with 2" flange plate, or similar fabricated from FB and OA (OrdinaryAngle). All sound.  
Stringers: 2x1/4" FB. Sound.

Keel: 4x1" FB. Sound  
Keelson: 12" x 1/4" plate. Sound

Deck plating: 1/4" square pattern tread plate. Sound  
Deck beams: 2.5"x3/16" FB. Sound.

Bulkheads: 1/4" plate. Collision bulkhead, machinery space bulkheads forward and aft. Sound but no longer meet the watertight integrity requirements for a commercial tug.  
Deckhouse: 1/4" or 3/16" steel plate. Largely new. Sound.

Cabin sole: 3/4" plywood overlaid with 3/4" solid cherry wood planking. New.

**ANCHORING & MOORING**

Anchors: Navy stockless, 40lb.  
Rode: 250' of 3/8" chain. New.  
Locker: Yes.  
Windlass: Vetus Alexander III, 12v dc electric. New.  
Bow roller: No, spurl pipe through deck and side. Sound.  
Cleats: Three 4" dia post crosshead bitts forward, two aft. Sound and secure.  
Fenders: Ten assorted fisherman style and yacht style. In good order.  
Boat hook: Yes.  
Lines: Four at 25' x 1" braided nylon. New.  
Five assorted sizes. Used but in good order.

**LADDERS, RAILS & STANCHIONS**

Boarding ladder: Aluminum portable hook-on type. In good order.

Grab handles & rails: 1" pipe on deckhouse tops and sides. Secure.

Bow rail & stanchions: 1" pipe on bulwark. Bulwark height 19" top rail height 30". Secure.

Side rail & stanchions: 1" pipe on bulwark. Bulwark height 10" with intermediate rail and top rail height 35". Secure.

Stern rail & stanchions: 1" pipe on bulwark. Bulwark height 10" with intermediate rail and top rail height 35". Secure.

**HATCHES, DOORS & WINDOWS**

Exterior doors: Hinged aluminum doors each side of wheelhouse and to machinery space. New.

Exterior hatches: Vernon quick acting flush deck hatch to lazarette, clear opening 24". New.

Windows: Oversized laminated safety glass in rubber frames inset into steel plating. New.

Portlights: Eleven Bronze, period portlights. Heavy duty commercial. Sound.

Interior doors: Cherry wood, hinged with "earth magnets" for closures. New and secure.

Interior hatches: Loose lift up hatch in cabin sole to bilges. New. Secure.

**HULL & DECK FITTINGS – Miscellaneous**

Towing bitt, double 6" dia. posts with 3.5" dia. Crosshead. Visually secure and in good order. See [1]

**RIG**

Mast: Forward, 4" dia steel pipe. For navigation lights, flags and shapes.  
Aft, 4" dia steel pipe. For lifting dinghy.

Aft Mast Stays: Two 1" steel pipe.

Aft Boom: 2" dia steel pipe

**PROPULSION MACHINERY**

Engine model: Cummins H-6-1P, 165 hp @ 1800 rpm.  
Visually clean and in good order.

Model #: HRMR-602  
Engine serial #: 240723 (136621)  
Transmission model: Twin Disc MG509  
Transmission serial #:  
Gear ratio: 2.95:1  
Engine seats: Rigid mounted on engine beds. Secure.

Cooling system:  
Type: Closed with skin coolers port and starboard, cross connected within machinery space.  
Valves: None seen.  
Piping & hoses: Pipe. Sound.

Clamps: Pipe threaded fittings. Secure.

Exhaust system:  
 Type: Dry  
 Pipes: Steel pipe. Sound  
 Silencer : In stack. Visually sound.  
 Clamps : Bolted flange joints. Secure.

Belts: In good order.

Shafting: SS, 2.5" dia. In good order.  
 Coupling: Rigid flanged coupling. Secure.  
 Shaft inner bearings: None.  
 Stern tube bearing: Cutless. As new.  
 Propeller: 33x20RH, three blade. Secured with two hex nuts and split pin.

### **AUXILIARY MACHINERY**

Vetus 12v dc bow thruster.

### **FUEL SYSTEM**

Type: Diesel.  
 Fill(s) Location: Aft deck in way of aft corners of deckhouse. Flush with no save-alls.  
 Grounded: Inherent grounding due to steel structure.  
 Fill pipe: Steel pipe. In good order.  
 Tank Location: Each side aft end of machinery space.  
 Make: Structural.  
 Material: Steel.  
 Capacity: ~125 gallons each.  
 Grounded: Inherent grounding due to steel structure.  
 Shut-off: At each tank.  
 Vent(s) Location: Goose necks on aft deck at sides.  
 Screen: Not noted. {A}  
 Delivery line(s) Material: Hose and copper pipe.  
 Support: Secure.  
 Filters: Yes.

### **CONTROLS**

Steering: Wheel, chain & rod, quadrant, unbalanced steel plate rudder support by lower bearing pintle and upper stock bearing. In good order.  
 A bow thruster is fitted to assist in low speed maneuvering and docking.

Helm indicator: Wheel spoke.  
 Engine: Morse cable.  
 Helm console switches: For all essential services.  
 Helm console gauges  
 Temperature – coolant  
 Ammeter  
 Voltmeter  
 Oil pressure – engine  
 Tachometer  
 Hours 20 with power on, 16 running. (+ ~1300 hours prior to fitting of new meters)

**BILGE PUMPING SYSTEM**

Pump(s): Rule with float switch in machinery space.  
 Piping: Hose. In good order.  
 Valves: No.

Pump(s): Manual plunger type, bronze. In good order.  
 Piping: Steel pipe. In good order.  
 Valves: Strum box at suction.

**VENTILATION**

Engine space: Cowl vent, Charlie Noble vent and 12v dc electric fan extractor.  
 Fuel tank space: Common to above.

**HEATING & AIR CONDITIONING**

None fitted.

**ELECTRICAL SYSTEM – DC**

Battery(ies): Four for engine start, four for general service. New.  
 Location : Machinery space, to starboard.  
 Restraint : Contained within wood box on raised shelf under side deck.  
 Cover : Wood lid.  
 Ventilation : As for machinery space.  
 Cables : 2/0. New.  
 Selector switch: Five arranged to enable full flexibility. {B} Battery selector switches not identified. It would be useful to have them marked as to function with posted instructions for correct use including a single line diagram.

Batteries: Two for bow thruster, 6v golf cart type connected in parallel to provide 12v. New.  
 Location : Forward cabin, under berth, adjacent bow thruster.  
 Restraint : Contained within wood box  
 Cover : Wood lid.  
 Ventilation : No special provision.  
 Cables : 4/0. New.

Alternator: 160 amp Motorola A-210-311.  
 Wiring: Marine grade. New.  
 Panel: All breakers. Located in pilothouse adjacent helm. New.

**ELECTRICAL SYSTEM – AC**

Shore connection: At aft bulkhead of deckhouse. Marinco. New.  
 Shore power cord: In good order.  
 Panel: All breakers. Located in pilothouse adjacent helm. New.  
 Main shore power breaker/switch on aft bulkhead of machinery space. New.  
 Inverter breaker/switch on aft bulkhead of machinery space. New.

Generator: None. Pro Watt 3000 dc to ac inverter installed in lieu. New.  
 Selector switch: Yes. One of the five noted under Battery Selector Switch above.  
 Charger: New Marine 80, 80 amp fully automatic, for three banks, serving general service, engine start and bow thruster banks.

Wiring: Marine grade. New.  
 Outlets: Exterior grade with covers. New.  
 Fixtures: No.  
 Appliances: No.

**NAVIGATION & ELECTRONICS EQUIPMENT**

Barometer: Schatz. In excellent condition.  
 Chronometer: Schatz 8 day ship's clock. In excellent condition.  
 Compass: Corsair with compensation spheres. Prism a little cloudy and should be swung and provided with a compensation card for complete reliability  
 Sound signaling device: Air horn.  
 Lights: Running, anchoring and towing lights. All functional.  
 Searchlight: Guest. New.  
 Windshield wipers: Pantograph style. New.  
 Depth indicator: Autohelm Seatalk. New.  
 Knot log: No.  
 Radios: Horizon Standard Eclipse +. New.  
 Public Address: No.  
 Autopilot: No.  
 Electronic positioning: Furuno GPS GP32. New.  
 Radar: Furuno scanner. Used. Display unit yet to be acquired.

**CATHODIC PROTECTION**

Zinc anodes on rudder and skeg. New.

**BONDING**

Inherent

**LIGHTNING PROTECTION**

Inherent

**FRESH WATER SYSTEM**

Pressurized: Non-potable drawn from overboard via electric Jacuzzi pump.  
 Potable drawn from portable 20 gallon plastic bottle by manual pump.  
 Piping: Mix of bronze, copper and vinyl hose. New. In good order.  
 Valves: Bronze seacocks.

**GREY WATER SYSTEM**

Direct overboard below waterline and fitted with bronze seacock.

**SEWAGE SYSTEM**

Intake valve: Bronze seacock. New.  
 Intake piping: Vinyl hose. New.  
 Toilet: Located in machinery space to port in enclosed commode. Electric flush. New.  
 Holding tank  
     Location: Machinery space, forward of toilet  
     Material: Polyethylene. New.  
 Piping: Vinyl hose. New.  
 Macerator: Yes.  
 Treatment unit: No.  
 Discharge piping: Vinyl hose. New.  
 Discharge fitting: Deckhouse side to port. New.

### **GALLEY OUTFIT**

Sink: SS. New.  
Oven: Sanyo microwave. Used. In good order.  
Range: Buffet 110v ac. Used. In good order.  
Refrigerator: Kenmore, domestic 110v ac. New.

### **PROTECTIVE COATINGS & COSMETICS**

Hull below water two coats epoxy plus antifouling.  
Structure above waterline two coats epoxy plus Tremclad.

### **LININGS**

Double bubble foil backed insulation on exposed structure. New.  
Masonite ceiling, deckhead liner and bulkheads. New.

### **DECK COVERINGS**

Loose mats

### **AWNINGS, SCREENS & COVERS**

None.

### **SOFT FURNISHINGS**

All new.

### **MISCELLANEOUS EQUIPMENT**

Sea B Que propane barbeque on aft deck. In good order.  
10' sailing/rowing dinghy. Fibreglass, simulated lapstrake hull. Well used but servicable.

### **SAFETY EQUIPMENT**

Liferings: One approved with line.  
Heaving line: Two.  
PFDs: Five.  
Flares: Pistol and shells.  
Waterproof flashlight: Yes.  
Fire fighting: Two at 2A 10BC  
Emergency bilge pump: Manual, see Bilge System.  
Fire axe: Yes.  
Fire bucket: One.

### **DOCUMENTATION (Certificates, manuals etc)**

Registration certificate.  
Equipment manuals.  
System diagrams.

**GENERAL COMMENT**

Vessel has been extensively overhauled and re-fitted. Structurally sound and with all systems functional and equipment of high quality.

**INSURABILITY**

The vessel as seen, remains suitable for its designed operating conditions for recreational use. Some minor modifications may be required to return it to full Transport Canada Marine Safety compliance as a commercial tug. See CONSTRUCTION – Bulkheads above and [1] below.

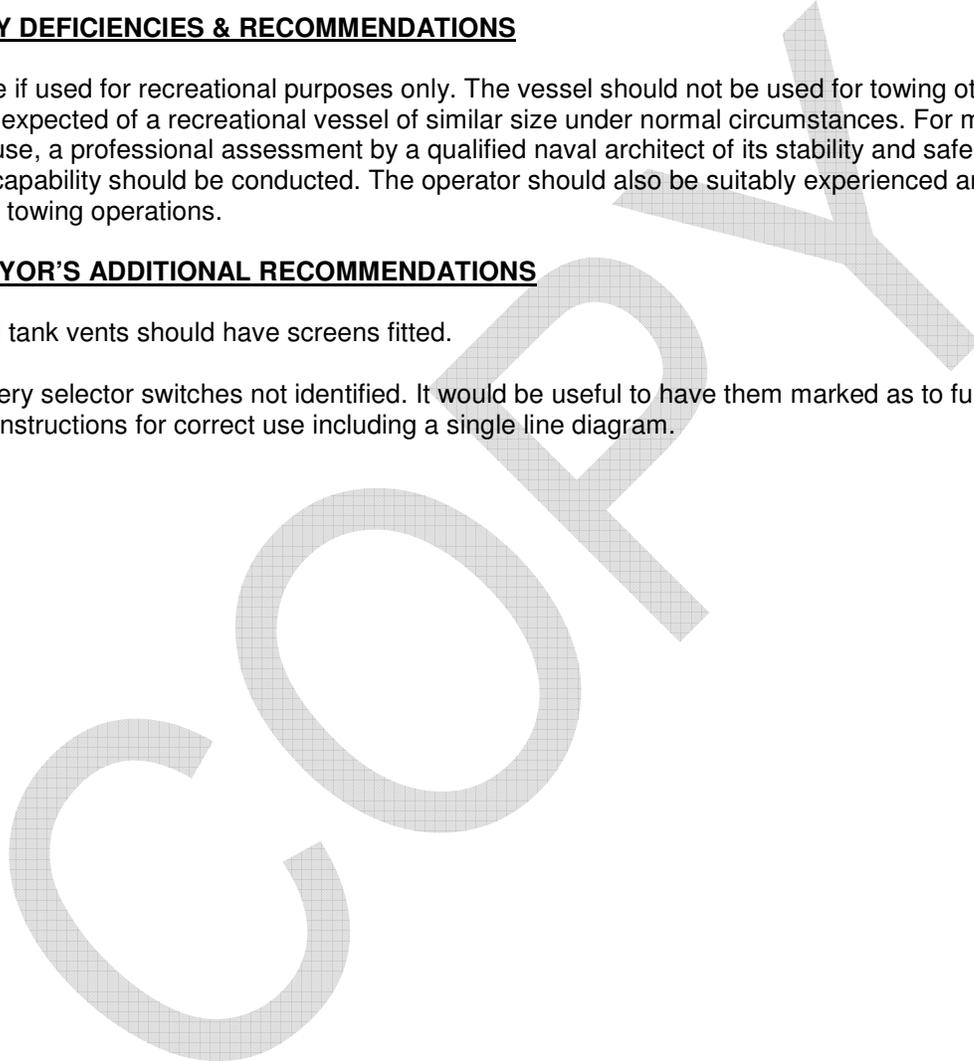
**SAFETY DEFICIENCIES & RECOMMENDATIONS**

[1] None if used for recreational purposes only. The vessel should not be used for towing other than as may be expected of a recreational vessel of similar size under normal circumstances. For more severe towing use, a professional assessment by a qualified naval architect of its stability and safe maximum towing capability should be conducted. The operator should also be suitably experienced and qualified to conduct towing operations.

**SURVEYOR'S ADDITIONAL RECOMMENDATIONS**

{A} Fuel tank vents should have screens fitted.

{B} Battery selector switches not identified. It would be useful to have them marked as to function with posted instructions for correct use including a single line diagram.



**ANNEX A**

**VALUATION**

Market value, as inspected: In the range \$125,000 to \$ 150,000.  
Replacement cost new: In the range \$450,000 to \$500,000.  
NOTE – compound curve hull forms of steel are more costly to produce than developed flat plate designs.

Valuation based upon prevailing local market, vessel uniqueness, condition and outfit.

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