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October 24, 2022

CONDITION AND VALUATION SURVEY / APPRAISAL REPORT

Vessel: P/V "DRAKE"
File No. 22032

This report is issued in accordance with the terms and conditions attached as enclosure #2

This is to certify that the undersigned Marine Surveyor did on October 4, 2022, acting at the request of Mr. Jason Covell, attend on board the vessel P/V "DRAKE". The vessel was inspected afloat at Pier 9, San Francisco.

The reason for the above listed attendance was to perform a Condition and Valuation Survey. The purpose of the survey was for establishing the general condition of the vessel, as well as the Fair Market Value (FMV) and Replacement Cost New (RCN). The intended user of the survey is the San Francisco Bar Pilots, the California Board of Pilot Commissioners, and Interested Underwriters.

SCOPE OF WORK

As part of the appraisal process, I inspected the vessel afloat at Pier 9, San Francisco.

I investigated the value of the vessel based upon the definition of value listed above.

Sales Comparison (Market) Approach, Cost Comparison Approach, and Income Approach were considered. No information regarding the vessel's income was provided so this approach was not used. Since this is a specialized, unique vessel with few, in any, sales/listing comparables available, the Market Approach was not used. The cost approach was used to develop the opinion of value and is detailed in the appraisal section of the report on pages 18-23.

GENERAL INFORMATION

Client:	San Francisco Bar Pilots
Vessel Name:	"P/V "DRAKE"
Official Number:	1222874
Other No.:	Hull No. 012
Owner:	San Francisco Bar Pilots Protection and Benevolent Association
Address:	Pier 9, East End, San Francisco, CA 94111
Home Port:	San Francisco
Gross Tons:	190 GRT / 222 GT ITC
Net Tons:	138 NRT/ 66 NT ITC
Builder:	Rainer Shipyard, Rainer, OR
Year Built:	2009
Intended Service:	Pilot station vessel
Cruising Speed/Max Speed:	14.3 kts. at 85% / 15.3 kts. at 100%
Last Dry Docking:	May 2021
Conversions/ Modifications:	During the 2021 dry docking the following work was reportedly accomplished:

- Anode renewals
- Sea chest Strainers removed, cleaned and reinstalled
- Rudder Stuffing Box packing replaced
- Propeller R&R and check
- Starboard Engine Room Intake Damper repairs
- Keel Coolers R&R, cleaned, tested and inspected
- Sea valve & overboard valves inspected and overhauled
- Underwater Hull and Freeboard Paint
- Sewage Holding Tank pump replaced
- Steering pump repairs
  - New steering cylinders installed
- Replaced CO2 bottles on fire system
- Repair Leaking Stbd overhead window in pilothouse
- Install new water heater
- Rudder stock repairs

During the 2019-2020 dry docking the following work was reportedly accomplished:

- Hull cleaning

- Underwater hull paint
- RHIB Safety chocks rebuilt
- Replace zinc anodes
- Port & Starboard tail shafts removed and inspected
    - Repaired as needed
- ABS Load line survey
    - Inspect airpipe vents
    - Fuel tank inspection
    - Sea valve and overboard valve inspection
- Renew salon door hinges
- Open and inspect MOB Boom Hydraulic Cylinder
- Hydraulic hose inspection
    - Renew MOB cylinder hoses
    - Renew Mast Hydraulic cylinder hoses
- Inspect and pressure test keel coolers
- New craft bearing cartridge for port craft bearing
- New jockey bar pins and bushings
- Repair overboard valve skin flanges

VESSEL PARTICULARS

Length Over All:	104' 02"	
Registered Length:	96.6'	
Registered Beam:	28.1'	
Draft:	9'	
Registered Depth:	13.0'	
Shell Plate:	Sheer strake:	½" steel plate
	Side/ bottom shell:	¼" steel plate
	Bottom over props:	3/8" steel plate
	Flat keel:	¾" steel plate
	Deckhouse:	¼" & 3/16" steel plate
Transverse Frames:	10" x ¼" Flanged plate	
Longitudinal Frames:	Side longs:	3" x 2" x ¼" angles
	Bottom longs:	4" x 3" x ¼" angles

GENERAL DESCRIPTION AND ARRANGEMENT

The P/V "DRAKE" is an all welded steel pilot station vessel with twin diesel propulsion. The vessel has a large open foredeck with a handrail inset approximately 3' from the deck edge. The vessel's anchor is stowed on the foredeck aft of a low breakwater. There is a raised escape hatch from the pilot's berth aft of the breakwater. Side decks lead aft past the deckhouse to the aft deck. A handrail inset approximately 1' from the deck edge surrounds the side decks and aft deck. Located on the port and starboard sides aft are aft steering stations. There is a flush escape hatch from the crew's quarters aft and a deck hatch into the lazarette on the starboard side aft. On the stern there is a ramp containing a stainless steel hydraulically actuated cradle, which carries the vessel's rigid inflatable rescue boat. On the port side of the deckhouse is a hydraulic man overboard retrieval davit with remote electrical controls.

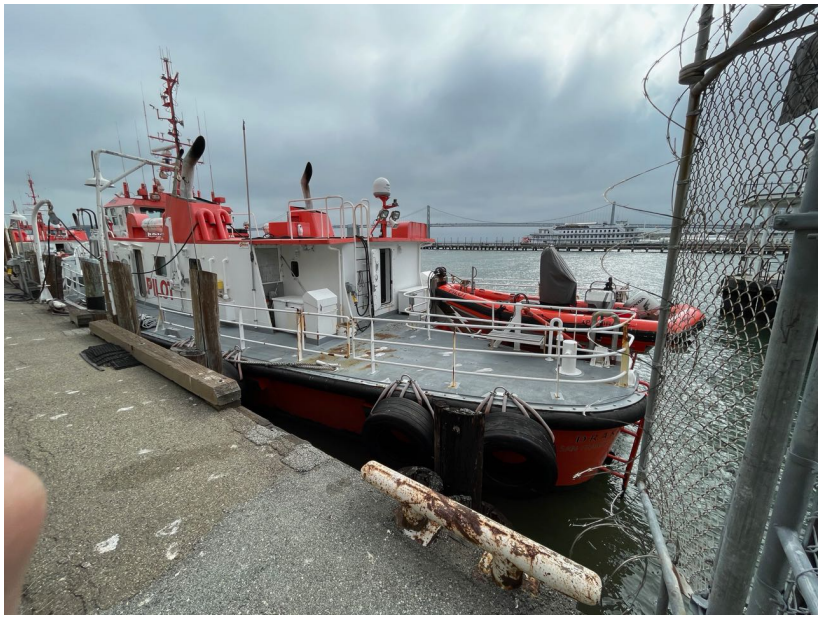
The pilothouse sits forward of amidships and is seven steps above the main deck. The pilothouse is outfitted with advanced navigational electronics, three computer systems, a centerline operator's chair, and two passenger seats on each side. There are fold down boarding platforms on each bridge wing. Aft of the pilothouse on the second deck is a hydraulically retractable mast and a large open deck containing two automatic inflatable life rafts and an emergency litter.
On the main deck in the deckhouse forward is a lounge area with a large fixed table with swivel chairs, three fixed upholstered chairs to starboard, and an entertainment center and computer station forward. Aft of the lounge on the main deck is the vessel's galley, which contains a full commercial grade kitchen including range, under counter refrigerator, dishwasher, garbage compactors, double door refrigerator, single door freezer, and a chest freezer.

In the hull forward is a void tank that is accessible through a bolt on hatch on the collision bulkhead. The next compartment aft is a storeroom above, with a void area below accessible through a deck hatch. A watertight door separates the storeroom from the pilot's berthing area, which sits approximately below the pilothouse. The

pilot's berthing area contains eight berths, storage lockers, settees, and a head on the port side containing a sink, a toilet, and a shower, and a head on the starboard side containing a sink and toilet. The pilot's berth is accessed from stairs aft that lead up to the lounge, or from an escape hatch forward leading onto the foredeck. Below the pilot's berth in the bilge area is a void separated from the other bilge compartments by watertight bulkheads fore and aft. Aft of the pilots berthing area is the engine room containing the vessel's main engines, two auxiliary gensets, and support machinery. The engine room is accessed from a watertight door aft from a passageway that leads upstairs to the galley area or aft to the crew's quarters. The crew's quarters contain three single berth staterooms and one double berth stateroom, as well as a head containing a toilet, sink, and stall shower. There is an emergency escape hatch from the crew's head, onto the aft deck. The lazarette is accessed through a deck hatch to starboard and contains the vessel's steering gear, including the steering hydraulic power units, and the hydraulic power units used to raise and lower the escape boat.

The vessel is well fendered by "D" rubber, which is continuous all of the way around the sheer, except for the aft ramp. Additionally, on each side there are four additional "D" rubber sections set about 1' below the sheer.

The vessel's fuel oil is contained in two double bottom tanks amidships and two day tanks located in the engine room aft. The vessel's freshwater is contained in two tanks totaling 800 gallons in the engine room. Additionally, there are two 400 gallon per day water makers on board for freshwater production. The vessel is equipped with static flume type anti-roll tanks located amidships beneath the pilothouse.



PROPULSION

Number Of Engines:	Two
Fuel:	Diesel
Make/Model:	Caterpillar 3508C turbo after cooled (EPA Tier II compliant)
Total Horsepower:	2,200
Port Serial Numbers:	TTB00238
Starboard Serial Numbers:	TTB00235
Port Engine Hours:	35,279 (per meter)
Starboard Engine Hours:	35,279 (per meter)
Cooling:	Freshwater through Johnson Duramax cupronickel grid coolers
Exhaust:	Dry stack
Starting:	Ingersol Rand pneumatic
Reverse/Reduction Gear:	Twin Disc MG 5321-DC Port S/N: 2001059 Stbd. S/N: 2001060
Gear Ratio:	4.06:1
Engine/Gear Foundations:	Integral welded steel girders, engines mounted on Lo-Rez vibration isolators

Port main engine

Starboard main engine

Propulsion Comments:
The following machinery major repairs have reportedly been done since the last survey:

- 6/28/19 Starboard Reduction gear
  - Clutch failure and repair
- 12/11/19 Port Reduction gear
  - Port Clutch Repair

AUXILIARY EQUIPMENT

Auxiliary generator(s):	Two Northern Lights John Deere 4045TFM75 (EPA Tier II compliant)
Rating:	65 kW; 81 kva
Gen. Hours:	Port 20,106.5; Stbd. 20,088.9
Cooling:	Fresh water through Johnson Duramax cupronickel grid coolers
Exhaust:	Dry stack
Pumps:	Grundfos stainless steel fresh water pump. Flowserve fuel oil transfer pump with manifold. (3) Barnes 100CE bilge fire pumps. (1) Diesel America West DDL48-2PT portable emergency pump (see Findings and Recommendations). Wilden pneumatic lube oil transfer.
Other Equipment:	F.A.S.T. Systems MX-1 S/N 17071 marine sewage system. Beam Systems M.N 2089 central vacuum. Village Marine Tec M/N PW1600 fresh water maker. Bilge suction manifold. Two Quincy M/N 310-104 air compressors with 80 gallon receivers, equipped with 215 psi pressure relief valves and Rogers Posidrain automatic drain valves. Capac 50140-022 S/N 29308 impressed current cathodic protection system. AO Smith ECT 80 200 80 gallon water heater. Proflow freshwater surge tank. Levoit air purifier, one in lounge and one in pilots quarters.

ELECTRICAL SYSTEM

1.	*AC System Description:*	AC power is provided by either genset, or by shore power. 208 Volt power leads to a Harris Electric switch panel with three circuit breakers isolated by a slide bar. The switch panel has volt, amp and hertz meters for the ships power, and a volt meter for shore power. There is also a ground fault amp meter. The main breaker is located in the engine room. There are sub-panels located in the galley and the pilothouse. Shore power is supplied through a marine type 100 amp receptacle located on the port stern.
2.	*DC System Description:*	Each genset has its own 8-D 12VDC cranking battery, each charged by separate McCarron VMI 30 amp chargers. There are two 24VDC banks for each main engine control system, each bank having two 8-D 12VDC batteries charged by separate McCarron 40 amp chargers. Each 24VDC bank has it own circuit breaker panel. There are four 8-D batteries in two 24VDC banks in plastic battery boxes located aft of the pilothouse, each bank is charged by a separate McCarron 25 amp charger. There are three circuit breaker panels in the pilothouse.
3.	*Battery charger(s):*	Two McCarron type VMI 24503, M/N 200-2450-03, 24 volt 18.5 amp. Two Two McCarron type VMI 12352 M/N 200-1230-03 12volt 8 amp.

MISCELLANEOUS EQUIPMENT AND SYSTEMS

Marine Sanitation Device:	Three marine toilets discharge into a 150 gal. Sewage tank using fresh water. Two Barnes submersible sewage pumps pump effluent to the F.A.S.T. MSD which has an electric blower and two 360 GPD overboard pumps. Sewage can also be pumped from the holding tank overboard or ashore.
Bilge Pumps/piping:	Three Barnes 2" x 2" bilge/fire pumps with a manifold system with bronze gate valves and

	sacrificial zincs. Bilge discharge is above the water line and there are check valves in each bilge suction, to prevent back flooding.
Bilge Pumps Tested:	No
Domestic Water System:	Village Marine PW 1600 SM reverse osmosis water maker feed two 800 gal. water tanks. Grundfos fresh water pump with a Proflow 32 gal. pressure tank. One A.O Smith 80 gal. Electric hot water tank.
Ventilation:	Engine room has Woods Marine axial fan blowers with automatic dampers for fixed fire extinguishing system.
LPG System:	None
LPG System Meet Governing Standards:	N/A
HVAC Systems:	The lounge, pilots berth and pilothouse have ducted forced fan blowers with electric inline heaters. The pilothouse has a reverse cycle AC/heater.
Alarms:	Custom built electronic panels in the pilothouse and engine room with the following alarms: Port & starboard main engine: • Low oil pressure • High water temperature • Low water level • Low after cooler water level • Low control voltage Auxiliary 1 & 2: • Low oil pressure • High water temperature • Low water level Bilge Levels: • Forepeak bilge • Storeroom bilge • Pilots quarters bilge • Engine room bilge forward • Engine room bilge aft • Crews bilge • Lazarette bilge

Tank Levels:

- Port & stbd day tank high level
- Port & stbd day tank low level
- Sewage tank high level
- Grey water tank high level
- Starting air pressure
- Sewage alarm

Auto Nav steering alarms
Siemens System 3 fire detection system with sensors in galley, lounge, pilot berths, crew quarters and engine room (annual test conducted 3/2022)

STEERING SYSTEM

Number Of Stations:	There are five steering stations, one on each side of the pilothouse, port and stbd aft stations on the aft deck, a low pressure hydraulic helm pump in the lazarette, and a toggle switch in the lazarette equipped with a rudder angle indicator.
Description/Type Of Equipment:	Low voltage electric jog levers control electric pilot valves, controlling one of two hydraulic power units located in the lazarette. The hydraulic units power rams attached to tiller arms on each rudderstock. The rudders are interconnected by a jockey bar. The vessel can also be steered by the helm pump alone in an emergency.

PROPELLER(S) SHAFT(S) RUDDER(S)
(Information contained below from last survey in dry dock)

Shaft Size:	6" x 27' 4 ¾"
Material:	Aquamet 19
Struts:	Solid plate steel "V" struts
Bearings:	Bronze shelled cutless on stern and struts
Stuffing Box:	Dripless
Propeller Size/Type:	64" x 65" 5-blade
Material:	Nickel aluminum bronze
Condition:	Unknown; underwater body not inspected
Rudder Description:	Steel plate foil spades

Rudder Stuffing Box:	Bronze
Other:	Disc shaft brakes on propeller shaft

CORROSION CONTROL

Zincs:	In sea chests, on propeller shafts, rudders
Condition:	Renewed at last haulout
Bonding system:	N/A
Other:	Capac Electrocatalytic cathodic protection system part no. 50/40-022, S/N 29308

THROUGH HULL FITTINGS

Material:	Integral welded steel
Valves:	Bronze globe and ball
Condition:	Appears good

TANKAGE

Fuel Tanks:	Two double bottoms, two day tanks
Total Capacity:	9,024 gal.
Material:	Integral welded steel
Grounding:	Yes
Shut Off Valves:	Yes, remote on main deck
Fresh Water Tanks:	Two
Total Capacity:	800 gal.
Material:	Integral welded steel
Other:	Lube oil: 49 gal. Grey water: 61 gal. Sewage: 150 gal. Waste oil: 70 gal. Anti roll: 7,052 gal.

GALLEY EQUIPMENT

The following galley equipment was noted on board at the time of survey:

- Norcold under counter bar refrigerator
- Excellence chest freezer
- Elkay water cooler
- Bloomfield coffee maker

- Panasonic microwave oven
- Meile Pro dishwasher
- McCall M/N R6E under counter refrigerator
- Two Broan trash compactors
- Lang commercial restaurant electric range with 4 burners, grill, oven and Gaylord hood with exhaust fan and Ansul fire extinguishing system
- Cospolich double door refrigerator
- TMC True freezer
- Waring toaster
- Zozirashi rice maker
- Cuisinart food processor

GROUND TACKLE

Anchors:	Fortress FX-125 (69 lb.)
Windlass:	Hand reel in forward storeroom
Chain:	30' (est.) of ½" galvanized
Rode:	300' (est.) of 1" Sampson braid nylon

FIRE AND SAFETY

No. Portable Extinguishers:	14
Type/Size:	See table in following comments
Date Last Inspection:	3/2022
Type Of Fixed System and Size:	Fixed Co2 with (4) 100# bottles engine room; Ansul R-102 1.5 gal system in stove hood
Approximate Size of Engine Space:	N/A (engineered system)
Date Last Inspection:	3/2022
Fire Main, Hose, Nozzle:	(2) Main deck stations with 50' 1.5" lined fire hose, nozzle and spanner in fixed boxes
Fire Axe:	Two onboard
Number/Type Pfds:	18 Type I, 4 immersion suits
Ring Buoys:	(2) With light/line; (2) with line (see F&R's)
Epirb:	Yes (tested)
Flares:	Yes (see comments)
Life Raft:	Two 12 man automatic in cradles (see comments)

Horn:	Yes (tested)
Bell:	Yes
Navigation Lights:	Masthead, stern, sidelights, pilot specific lights
Navigation Lights Tested:	Yes
General Alarm:	Yes (with strobe in engine room-tested)
Oil Discharge Placard:	Yes
Garbage Discharge Placard:	Yes
Carbon Monoxide Alarm:	See Surveyor's Notes
First Aid Kit:	Yes
Other:	Fire and smoke alarms in all areas Stokes emergency litter in pilots berth Fixed fire monitors on each bridge wing Dual Light emergency lighting throughout vessel (tested-see comments below) Zoll AED+ defibrillator (see comments below) ADD/CPR pack Trauma kit Medical Ox (cyl. Cert. exp. 3/2019) (see Findings and Recommendations) Damage control kit located below the entertainment center

Fire & Safety Comments:

Raft inspections:
Port side expires 11/2022; starboard 11/2022. Raft hydrostatic releases expire 11/2023.

Flares:
(6) Red Parachute expiration date 8/2025 on nine and 9/2025 on one
(8) Hand red expiration date 8/2025
(6) Hand orange smoke expiration date 8/2025 on three and 9/2025 on three
(4) Floating orange smoke expiration date 9/2023

EPIRB:
Registration expires 6/08/2024
Hydrostatic release expired 8/2024
Battery expired 8/2022 (see Findings and Recommendations)

Other:
The Zoll defibrillator batteries are recommended to be changed every 5 years. There was a label indicating that the battery was last changed on2/04/2021. The expiration date on the pads is 10/07/2026.

The Switlik MOB Pack was originally set up to be automatically deployed by a switch engaging a solenoid from the pilothouse. That system no longer functions and it can now only be deployed manually. Also there was no label indicating the last inspection date (see Findings and Recommendations).

The Dual Light emergency lighting had the following issues:
Pilothouse one unit had a broken light and did not illuminate when tested
Pilothouse one unit did not illuminate when tested
(see Findings and Recommendations).

Portable Fire Extinguishers:

NO.	TYPE	SIZE OLD	SIZE NEW	LOCATION	INSPECTION
1	DC	B-II	80:B	Pilothouse	3/2022
2	C02	B-I	5:B	Pilothouse	3/2022
3	C02	B-I	5:B	Pilothouse	3/2022
4	DC	B-I	40:B	Lounge	3/2022
5	C02	B-III	10:B	Galley	3/2022
6	DC	B-I	40:B	Pilot's berth	3/2022
7	DC	B-I	40:B	Pilot's berth	3/2022
8	DC	B-I	40:B	Crew's berth	3/2022
9	Co2	B-II	10:B	Engine room	3/2022
10	DC	B-III	120:B	Engine room	3/2022
11	DC	B-II	80:B	Engine room	3/2022
12	C02	B-II	10:B	Engine room	3/2022
13	C02	B-II	10:B	Engine room	3/2022
14	DC	B-II	80:B	Engine room	3/2022

NAVIGATION/ELECTRONIC EQUIPMENT

The vessel is equipped with the following navigation/electronic equipment:

- Two (2) Furuno RPU-013 radar units (port S/N 4366-3328) (stbd S/N 4366-2939) with Furuno MU-201 CR displays and Furuno RCU-014 controls
- Two (2) Furuno GP150 GPS receivers (fwd S/N 6401-4866) (aft S/N 6401-2339)
- Furuno FCV-1150 color LCD depth sounder (S/N 2256-0259)
- Lenovo Thinkpad laptop computer system with HP Laserjet P1505 printer
- Four (4) SEA 157 VHF radios (S/N KS10340) (S/N KS10334) (S/N KS10335) (S/N KS10130)
- SEA 857 loud hailer (S/N KK10357)
- Simrad Marine GC80 digital gyro compass (S/N 3987) with control unit
- Simrad IS80 compass repeater
- Speery Marine Navipilot 4000 autopilot

- One (1) Carlisle & Fitch search light with dual remote controls
- Dirigo 6" compass with corrections balls
- Ritchie 4" compass with corrections balls
- Furuno FA-150 Universal AIS (S/N 3552-4702)
- RHO Theta Crewfinder RT-202 MOB direction finder
- Weems & Plath barometer
- Raymarine ST 60 wind speed direction meter.
- Headhunter Tank Sentry TS-3004 Tank Level Monitor
- Simrad Taiyo TD-LI550A Radio Direction Finder (S/N 1263771)
- Clarion CMD5 AM/FM CD tuner
- Cerberus Pyrotronicx System 3 universal fire alarm control
- Auto Nav 2004 MA 101 steering alarm
- Chelsea ships chronometer
- Electric Helm Alert watch alarm
- Compass deviation card dated 21 Oct. 2009 posted

Airphone RA-A onboard telephone with the following phone locations:

- Bridge
- Eight pilot berths
- Engine room
- Five crew berths
- Aft steering station
- Galley
- Lazarette.

The following entertainment electronics were found onboard:

- Samsung 1080P wide screen flat panel color television
- Samsung VHS / DVD player
- Direct TV unit
- Clarion CMD5 CD AM/FM stereo
- Lenovo X-270 laptop computer system with Asus flat panel monitor and HP Laserjet Pro printer

DECK EQUIPMENT

The vessel is equipped with a Northwind aluminum hull rigid inflatable. The vessel is powered by a Honda 50 hp 4-stroke outboard. The vessel is stowed on a stainless steel cradle mounted in the stern ramp that is hinged on the forward end to allow the ramp to be angled down by hydraulic rams for launching and retrieving. The ramp is equipped with a Pullmaster hydraulic winch for launch and retrieval. The vessel was equipped with a new Wing made inflatable tube system.

Rescue boat was equipped with a B:10 (old USCG size B-I) DC fire Extinguisher (tagged as inspected 3/2022), and a flare kit with (6) hand red (exp. 6/2022); (2) hand orange flares (exp. Jan & April 2022) and (5) aerial red flares (exp. 10/2024). There was a battery powered hand-held light that was marked as having batteries replaced 1/15/2019. However the light did not illuminate when tested (see Findings and Recommendations).

Tender Hull Identification No. (HIN)

FINDINGS AND RECOMMENDATIONS

HIGH PRIORITY (Recommendations to do immediately due to safety issues):

1. (2) Orange smoke flares in rescue boat expiration date Jan & April 2022. (6) hand red flares expiration date 6/2022. RECOMMEND renew expired flares.

2. The hand light in the rescue boat did not illuminate when tested. RECOMMEND repair or replace light and test it frequently.

1. The MOB Systems man overboard buoy mounted on the starboard aft rail was originally equipped with a solenoid operated switch from the pilothouse. The solenoid is now adrift and no longer functions, and the unit needs to be deployed manually. When I asked the operator that was on the vessel at the time of survey, he was not aware of this and did not know how to deploy the device manually. Also,

there was no tag indicating when the last inspection had been done. RECOMMEND that either the original remote deployment device be repaired, or the crew runs drills on how to deploy the device manually. Best practice would be to both repair the remote deployment and have drills on manual deployment.

3. The EPIRB battery expired on 8/2022. RECOMMEND replace.

4. One emergency light in the pilothouse had a broken off light and neither lights illuminated when tested.

MODERATE PRIORITY Recommendations (can be accommodated within the vessel's normal maintenance process):

1. The portable diesel pump was not tagged as being tested. RECOMMEND test / operate pump monthly and tag accordingly.

2. The ring buoy water lights both illuminated when tested. However, there was no label on the housing as to when the batteries were last changed. RECOMMEND change batteries annually and record battery change with a label affixed to the outside of the casing (or another recording device i.e. logbook).

3. Water was leaking from the forward space ventilation fan has damaged the hull ceiling insulation with bleeding rust noted at the bottom of the aft bulkhead and an accumulation of water in the bilge area below. RECOMMEND address as soon as possible to determine why the drains are leaking and keep the bilge area dry.

LOW PRIORITY (Recommendations considered as best practices or betterment):

1. Rust stains in the bilge below the pilot's berthing area indicate possible leakage. RECOMMEND monitor bilge and investigate further if additional water accumulates.

2. The starboard side aft steering station tach and rudder angle indicator have water. RECOMMEND replace instruments.

3. All but two of the emergency lights illuminated when tested. However, each light had a marking on them as to the last test (except for two) ranging from 2018 to 2020. RECOMMEND Best practice would be to inspect lights on a monthly basis.

4. The medical Oxygen carried is only required to be refilled every three years. However, best practice would be to inspect the unit monthly (open valve and see if the pressure is adequate) and have the unit inspected by a qualified professional annually.

5. The USCG has changed their fire extinguisher ratings, going from the B-1, B-2 etc., to a UL rating system. For commercial vessels over 65', 100-500 GRT they require a minimum of three 20-B extinguishers plus an additional 20-B extinguisher for each 1000 hp and fraction of 1000 hp. Based upon the USCG requirement (46 CFR 25.30-20(b)(1) the vessel would need a minimum of five 20-B extinguishers. Both American Boat and Yacht Council (ABYC) and National Fire and Protection Association (NFPA) require additional extinguishers, over and above those required by the USCG. NFPA has not yet updated their requirements to reflect the new ratings. ABYC recommends four 20-B extinguishers plus three additional 20-B extinguishers for the vessel horsepower (2200) for a total of seven 20-B units. RECOMMEND since the vessel currently carries eight portable extinguishers over 20-B rating, there is no recommendation to be made (see table 3 from ABYC A-4 attached as enclosure 4).

APPRAISAL

Opinion of Fair Market Value:	$2,450,000
Opinion of Replacement Cost New:	$11,664,000
Opinion of Fair Market Value of Tender:	$67,500
Opinion of Replacement Cost New of Tender:	$80,000

Notes for Appraisal:

A. An "as is, where is", cash equivalency, 100% ownership interest assumption was made in determining the opinion of Fair Market Value.

B. The estimated Fair Market Value is the definition from the American Society of Appraisers (ASA) Machinery and Technical Specialties (MTS) Committee: "*Fair Market Value* is an opinion expressed in terms of money, at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts, as of a specific date."

C. The estimated Replacement Cost New is the definition from the ASA MTS Committee website: **"***Replacement Cost New* is the current cost of a similar new property having the nearest equivalent utility as the property being appraised, as of a specific date."

D. Other terms used in this report have the following definitions:
Physical Obsolescence:
Physical obsolescence is a form of depreciation in which loss in value is due to the using up or expiration of its useful life caused by wear and tear, deterioration, exposure to various elements, physical stress and similar factors.
Economic Obsolescence:
Economic obsolescence is a form of depreciation in which loss in value is caused by external factors. In the case of the P/V CALIFORNIA it is due to CARB requiring machinery upgrades to US EPA Tier 4.

Extraordinary Assumptions:
"An assignment specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions".

E. Sales Comparison (Market) Approach, Cost Approach, and Income Approach were considered. No information regarding the vessel's income was provided so this approach was not used. Since this is a specialized, unique vessel with few, in any, sales/listing comparables available, the Market Approach was not used.

F. Using the Cost Approach, I took the estimated replacement cost of $8,100,000 (based upon the reported build cost of the P/V Drake in 2009). The Producer Price Index for "Ship Building and Repairing, Nonmilitary" was obtained from the Federal Reserve of St. Louis [1]. The index for 1/2009 was 186.7 and for 10/2022 it was 269.5. The formula for the current value is:

Current Value = (Current Index / Base Index) x Cost

Using this formula:

*Current Value = 269.5/186.7 x $*8,100,000*, or* $11,664,000

G. For the Cost Approach calculations, I assumed a replacement cost of $11,664,000, and a residual salvage value of $300,000.

[1] https://fred.stlouisfed.org/series/PCU336611336611A

H. The California Air Resources Board (CARB) has harbor craft regulations requiring diesel engines on commercial vessels to be compliant with U.S. E.P.A. emission tiers through 2022. The new regulations going into effect in 2023 are expected to require (the final rules have not been published) Tier 2 engines with the original date of manufacture of 2012 or earlier to comply with the amended regulations by 12/31/2025 (page 79, table 17 of "Proposed Amendments to the Commercial Harbor Craft Regulation"-see enclosure 3).

I. The cost to comply with the amended regulations, which includes design, stability calculations, repowering with USEPA Tier 4 final engines equipped with Diesel Particulate Filters (DPF), is estimated to be in the range of $3,000,000 to $4,000,000, potentially more than the vessel's fair market value.

J. The reduction in value caused by the external requirement posed by the amended Commercial Harbor Craft regulations would be Economic Obsolescence.

K. Using a Normal Useful Life (NUL) for use in the Cost Approach of 30 years is how Physical Obsolescence (depreciation) is calculated. This would result in a depreciation factor of 43.4%. Calculating the depreciation using the difference between the date of construction (2009) and the CARB required compliance date of 12/31/2025, or 16 years, would result in a depreciation factor of 81.3%. The difference between the two results (i.e., using 43.4% vs. 81.3%) would be the Economic Obsolescence to be applied.

L. Since the vessel has been maintained but not significantly improved (i.e. repowering or other major improvement) the Effective Age (EA) would be the calendar age of 13.

M. The calculation of Fair Market Value (Fair Value) by the Cost Approach, with only Physical Obsolescence (depreciation) considered, and using a 30-year NUL is as follows:

Current Replacement Cost New	$11,664,000
Less Terminal Value	- $300,000
	$11,364,000
Less depreciation *(*11,364,000 *x .434)*	-$4,931,976
	$6,432,024
Plus Terminal Value	+ $300,000
	$6,732,024

N. The calculation of Fair Market Value (Fair Value) by the Cost Approach, with only Physical Obsolescence (depreciation) considered and using a 23-year NUL is as follows:

Current Replacement Cost New	$11,664,000
Less Terminal Value	- $300,000
	$11,364,000
Less depreciation *(*11,414,000 *x .813)*	-$9,238,932
	$2,125,068
Plus Terminal Value	+ $300,000
	$2,425,068

O. The difference between the two calculations, or $4,306,956 is the amount of Economic Obsolescence to apply as follows:

Fair Market Value calculated using a 30-year NUL:	$6,732,024
Less Economic Obsolescence:	-$4,306,956
Fair Market Value with Amended Commercial Harbor Craft regulations considered:	**$2,425,068**

P. The calculated Fair Market Value was rounded up to $2,450,000.

Q. For the tender the following assumptions were assumed:
Replacement cost new of $80,000
NUL of 25 years
A terminal value of $2000

The difference between the vessel's age and the current date would be the amount of Physical Obsolescence applied (2022-2008=14 years). However, completely new tubes were recently installed reportedly costing about $32,000 installed. In my opinion this would add about 10 years to the useful life of the vessel, reducing the EA to 2018. This would change the Physical Obsolescence applied to 4 years (2022-2018=4), resulting in depreciation due to Physical Obsolescence of 16%. After deduction of the terminal value, application of 16% depreciation, and adding back the terminal value, the resulting number is $67,520, which is the opinion of Fair Market Value by the cost approach. This amount was rounded down to $67,500.

R. I made the following assumptions regarding the valuation:

- Information provided by others that was considered in the valuation is from sources believed to be reliable and no further responsibility is assumed for its accuracy.

S. The following Extraordinary Assumptions were made regarding the valuation:
- The condition of the underwater body and running gear supports the appraisal values.
- The proposed CARB Commercial Harbor Craft rule amendments go into effect as currently written.

T. No Hypothetical Conditions were assumed.

U. The following Limiting Conditions apply to the report:

- All information presented in this report is true and accurate to the best of the surveyor / appraiser's knowledge and belief.
- The surveyor / appraiser renders no opinion as to legal title. Prevailing liens or other encumbrances were disregarded, and the property was appraised as if free and clear, unless otherwise specifically stated.
- This study was made for the purpose stated and cannot be relied on for any other purpose. This report is for your internal use only and, unless otherwise stated, should not be disseminated to the public or third parties in any part of form.
- All estimates of value are presented in this report and the surveyor / appraiser's considered opinion. The opinion of value is only valid for the stated effective valuation date (effective date is located adjacent to the signature line on the last page of the report), and for the stated purpose (located on the first page, second paragraph).
- I reserve the right to make such adjustments to the valuation herein reported as may be required by consideration of additional or more reliable information that may become available.
- Testimony or attendance in court by reason of this appraisal shall not be required unless arrangements for such services have previously been made.
- Neither all, nor any part, of this report is to be conveyed to the public though advertising, public relations, news, sales, or other media without written consent and approval of the undersigned.
- This appraisal was made in accordance with the code of ethics set forth by the American Society of Appraisers.
- This appraisal did not consider the possibility of the existence of hazardous materials or toxic wastes. Should there be concerns about the existence of such substances on the property, we consider it imperative that you retain the

services of a qualified independent engineer or contractor to determine the existence and extent of any hazardous materials, as well as the costs associated with any required or desirable treatment or removal.

- This examination has been conducted without making removals, or opening up to expose areas or components ordinarily concealed, or testing for tightness, or testing and/or running machinery or equipment, and does not, therefore, address any damages and/or deficiencies which might have been revealed if such procedures had been executed.
- No incline experiment, stability studies or stability analysis was performed in conjunction with this condition and valuation survey. This report and the attending surveyor and this office express no opinion relative to the stability of this vessel. **FURTHER, THIS LIMITED REPORT IS ISSUED IN ACCORDANCE WITH THE TERMS AND CONDITIONS ATTACHED AS ENCLOSURE #2.** Acceptance of this report or its use for any purpose shall serve as acknowledgment of and agreement with these terms and conditions.

SURVEYOR'S NOTES

A. Vessel's call sign is WDF2215.
B. Radio station license posted dated 7/17/2019 expires 9/23/2029
C. ABS Loadline Certificate # 09207084-4033258-030 dated 03/JAN/2020 expires 29/DEC/2024.
D. There was a Stability Letter issued by ABS dated 27SEPT/2012 posted onboard
E. Vessel's USCG Certificate of Documentation #1222874 dated 9/April/2022 expires 29/May/2023.
F. EPA General Permit #VPBE19780 dated 8/01/2019 posted (no expiration date given).
G. Carbon Monoxide (CO) is an odorless gas produced during the burning of hydrocarbons. Vessel equipped with gasoline engines and enclosed accommodation spaces are required by American Boat and Yacht Counsel (ABYC) A-24.7.1 to be equipped with a CO detection system. Vessels equipped with solid fuel or LPG appliances, or diesel engines, are recommended to be equipped with a detection system.
H. With the exception of the deficiencies noted above, this vessel appeared to be in satisfactory condition for operation as a Pilot Station Vessel.

This report is issued without prejudice to any parties who may be concerned.

10/04/2022
Effective Date

TEICHEIRA MARITIME SURVEYORS, INC.
Dana R. Teicheira
NAMS Certified Marine Surveyor
ASA Accredited Senior Appraiser

Enclosures

1. Appraisal Certification
2. Survey Terms and Conditions
3. CARB proposed amendments to Harbor Craft Regulations
4. ABYC A-4 Table 2 fire extinguishers for vessels greater than 65'