

NAMS Certified Marine Surveyor
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ARM / MTS
Commercial Marine Surveying

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11/09/2020

October 21, 2020

CONDITION AND VALUATION SURVEY / APPRAISAL REPORT

Vessel: P/V "DRAKE"
File No. 20041

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 September 4, 2020, 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 Pilots Commission, 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 16-19.

GENERAL INFORMATION

1. *Client:* San Francisco Bar Pilots
2. *Vessel Name:* "P/V "DRAKE"
3. *Official Number:* 1222874
4. *Other No.:* Hull No. 012
5. *Owner:* San Francisco Bar Pilots Protection and Benevolent Association
6. *Address:* Pier 9, East End, San Francisco, CA 94111
7. *Home Port:* San Francisco
8. *Gross Tons:* 190 GRT / 222 GT ITC
9. *Net Tons:* 138 NRT/ 66 NT ITC
10. *Builder:* Rainer Shipyard, Rainer, OR
11. *Year Built:* 2009
12. *Intended Service:* Pilot station vessel
13. *Cruising Speed/Max Speed:* 14.3 kts. at 85% / 15.3 kts. at 100%
14. *Last Dry Docking:* January 2020
15. *Conversions/ Modifications:* 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 Tailshafts 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

1.	<i>Length Over All:</i>	104' 02"
2.	<i>Registered Length:</i>	96.6'
3.	<i>Registered Beam:</i>	28.1'
4.	<i>Draft:</i>	9'
5.	<i>Registered Depth:</i>	13.0'
6.	<i>Shell Plate:</i>	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
7.	<i>Transverse Frames:</i>	10" x ¼" Flanged plate
8.	<i>Longitudinal Frames:</i>	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

1. *Number Of Engines:* Two
2. *Fuel:* Diesel
3. *Make/Model:* Caterpillar 3508C turbo after cooled (EPA Tier II compliant)
4. *Total Horsepower:* 2,200
5. *Port Serial Numbers:* TTB00238
6. *Starboard Serial Numbers:* TTB00235
7. *Port Engine Hours:* 31,744 (per meter)
8. *Starboard Engine Hours:* 31,749 (per meter)
9. *Cooling:* Freshwater through Johnson Duramax cupronickel grid coolers
10. *Exhaust:* Dry stack
11. *Starting:* Ingersol Rand pneumatic
12. *Reverse/Reduction Gear:* Twin Disc MG 5321-DC
Port S/N: 2001059
Stbd. S/N: 2001060
13. *Gear Ratio:* 4.06:1
14. *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

- | | | |
|----|-------------------------------------|---|
| 1. | <i>Auxiliary generator(s):</i> | Two Northern Lights John Deere 4045TFM75 (EPA Tier II compliant) |
| 2. | <i>Rating:</i> | 65 kW; 81 kva |
| 3. | <i>Gen. Hours:</i> | Port 17,662.2; Stbd. 17,652.0 |
| 4. | <i>Cooling:</i> | Fresh water through Johnson Duramax cupronickel grid coolers |
| 5. | <i>Exhaust:</i> | Dry stack |
| 6. | <i>Pumps:</i> | 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. |
| 7. | <i>Other Engine Room Equipment:</i> | 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.

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.

Electrical System Comments:

Wing nuts were noted on the house battery terminals (see Findings and Recommendations).

MISCELLANEOUS EQUIPMENT AND SYSTEMS

1. *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.
2. *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.
3. *Bilge Pumps Tested:* No
4. *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.
5. *Ventilation:* Engine room has Woods Marine axial fan blowers with automatic dampers for fixed fire extinguishing system.
6. *LPG System:* None
7. *LPG System Meet Governing Standards:* N/A
8. *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.
9. *Alarms:* Harris Electric with panels in the pilothouse and engine room with the following alarms:
Port & starboard main engine:

Low oil pressure
High water temperature
Low after cooler water level
Low control voltage
Auxiliary 1 & 2:
Low oil pressure
High water temperature
Low water level
Engine room bilge forward
Engine room bilge aft
Forepeak bilge
Pilots quarters bilge
Storeroom bilge
Crews bilge
Lazarette bilge
Low voltage alarm on DC house bank
batteries
Port & stbd day tank 1 high level
Port & stbd day tank low level
Starting air pressure
Grey water tank high level
Sewage tank high level
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 14/Dec/2015)

STEERING SYSTEM

1. *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.
2. *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)

- | | | |
|-----|-----------------------------|--|
| 1. | <i>Shaft Size:</i> | 6" x 27' 4 ¾" |
| 2. | <i>Material:</i> | Aquamet 19 |
| 3. | <i>Struts:</i> | Solid plate steel "V" struts |
| 4. | <i>Bearings:</i> | Bronze shelled cutless on stern and struts |
| 5. | <i>Stuffing Box:</i> | Dripless |
| 6. | <i>Propeller Size/Type:</i> | 64" x 65" 5-blade |
| 7. | <i>Material:</i> | Nickel aluminum bronze |
| 8. | <i>Condition:</i> | Unknown; underwater body not inspected |
| 9. | <i>Rudder Description:</i> | Steel plate foil spades |
| 10. | <i>Rudder Stuffing Box:</i> | Bronze |
| 11. | <i>Other:</i> | Disc shaft brakes on propeller shaft |

Comments:

The starboard side dripless propeller shaft seal appears to be leaking, based upon rust stains in the bilge area below (see Findings and Recommendations)

CORROSION CONTROL

- | | | |
|----|------------------------|--|
| 1. | <i>Zincs:</i> | In sea chests, on propeller shafts, rudders |
| 2. | <i>Condition:</i> | Renewed at last haulout |
| 3. | <i>Bonding system:</i> | N/A |
| 4. | <i>Other:</i> | Capac Electrochemical cathodic protection system part no. 50/40-022, S/N 29308 |

THROUGH HULL FITTINGS

- | | | |
|----|-------------------|-----------------------|
| 1. | <i>Material:</i> | Integral welded steel |
| 2. | <i>Valves:</i> | Bronze globe and ball |
| 3. | <i>Condition:</i> | Appears good |

TANKAGE

- | | | |
|----|---------------------------|-----------------------------------|
| 1. | <i>Fuel Tanks:</i> | Two double bottoms, two day tanks |
| 2. | <i>Total Capacity:</i> | 9,024 gal. |
| 3. | <i>Material:</i> | Integral welded steel |
| 4. | <i>Grounding:</i> | Yes |
| 5. | <i>Shut Off Valves:</i> | Yes, remote on main deck |
| 6. | <i>Fresh Water Tanks:</i> | Two |

7.	<i>Total Capacity:</i>	800 gal.
8.	<i>Material:</i>	Integral welded steel
9.	<i>Other:</i>	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

GROUND TACKLE

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

FIRE AND SAFETY

1.	<i>No. Portable Extinguishers:</i>	14
2.	<i>Type/Size:</i>	See table in following comments
3.	<i>Date Last Inspection:</i>	3/11/2020
4.	<i>Type Of Fixed System And Size:</i>	Fixed Co2 with (4) 100# bottles engine room; Ansul R-102 1.5 gal system in stove hood
5.	<i>Approximate Size Of Engine Space</i>	N/A (engineered system)
6.	<i>Date Last Inspection:</i>	3/11/2020
7.	<i>Fire Main, Hose, Nozzle</i>	(2) Main deck stations with 50' 1.5" lined fire hose, nozzle and spanner in fixed boxes
8.	<i>Fire Axe:</i>	Two onboard
9.	<i>Number/Type Pfds:</i>	18 Type I, 4 immersion suits
10.	<i>Ring Buoys:</i>	(2) With light/line; (2) with line
11.	<i>Epirb:</i>	Yes tested
12.	<i>Flares:</i>	Yes (see comments)
13.	<i>Life Raft:</i>	Two 12 man automatic in cradles (see comments)
14.	<i>Horn:</i>	Yes
15.	<i>Bell:</i>	Yes
16.	<i>Navigation Lights:</i>	Masthead, stern, sidelights, pilot specific lights
17.	<i>Navigation Lights Tested:</i>	Yes
18.	<i>General Alarm:</i>	Yes (with strobe in engine room)
19.	<i>Oil Discharge Placard:</i>	Yes
20.	<i>Garbage Discharge Placard:</i>	Yes
21.	<i>Carbon Monoxide Alarm:</i>	See Surveyor's Notes
22.	<i>First Aid Kit:</i>	Yes
23.	<i>Other:</i>	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. 3/2021)

Fire & Safety Comments:

Raft inspections:

Port side expires 3/2021; starboard 9/2021. Raft hydrostatic releases expire 9/2021.

Flares:

- (9) Red Parachute expiration date 9/2022
- (6) Hand red expiration date 6/2022
- (6) Hand orange smoke expiration date 8/2022
- (4) Floating orange smoke expiration date 12/2019 (see Findings and Recommendations)

EPIRB:

- Registration expires 8/06/2022
- Hydrostatic release expired 10/2020
(see Findings and Recommendations)
- Battery expires 8/2022

Other:

The Zoll defibrillator batteries are recommended to be changed every 5 years. There was no record of when the batteries were last changed. The expiration date on the pads is 5/13/2021 (see Findings and Recommendations).

The MOB Systems emergency man overboard buoy on the starboard side aft railing is missing and the stainless steel tray is bent and distorted (see Findings and Recommendations).

Portable Fire Extinguishers:

No.	TYPE	SIZE	LOCATION	INSPECTION
1	DC	B-II	Pilothouse	3/11/2020
2	CO2	B-I	Pilothouse	3/11/2020
3	CO2	B-I	Pilothouse	3/11/2020
4	DC	B-I	Lounge	3/11/2020
5	CO2	B-II	Galley	3/11/2020
6	DC	B-I	Pilot's berth	3/11/2020
7	DC	B-I	Fwd space	3/11/2020
8	DC	B-I	Crew's berth	3/11/2020
9	Co2	B-II	Engine room	3/11/2020
10	DC	B-III	Engine room	3/11/2020
11	DC	B-II	Engine room	3/11/2020
12	CO2	B-II	Engine room	3/11/2020
13	CO2	B-II	Engine room	3/11/2020
14	DC	B-I	Engine room	3/11/2020

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 T-40 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 156 VHF Radio (S/N AB10403)
- 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 remote control
- 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 Pyrotronix System 3 universal fire alarm control
- Dell Vostro 220 S computer with Triplite battery backup and (2) Dell 17" flat panel monitors
- Auto Nav 2004 MA 101 steering alarm
- Chelsea ships chronometer
- Harris 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 T-430 laptop computer system with LG flat panel monitor

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.



Tender Hull Identification No. (HIN)

FINDINGS AND RECOMMENDATIONS

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

1. (4) Orange smoke floating flares expiration date 12/2019. RECOMMEND renew expired flares.
2. The emergency MOB Systems man overboard buoy on the starboard side aft railing is missing and the stainless steel tray is bent and distorted. RECOMMEND replace unit.

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

1. There were wing nuts on the battery terminals on the house load battery banks. RECOMMEND replace wing nuts with hex head nuts per American Boat & Yacht Counsel (ABYC) E-10.8.3 "Battery cables and other conductors size 6 AWG (13.3 mm²) and larger shall not be connected to the battery with wing nuts."
2. The Zoll defibrillator batteries are recommended to be changed every 5 years. There was no record of when the batteries were last changed. RECOMMEND change batteries and record date on unit.
3. The portable diesel pump was not tagged for the last being tested. RECOMMEND test / operate pump monthly and tag accordingly.

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

1. The EPIRB hydrostatic release was to expire 10/2020. RECOMMEND replace.
2. The port side aft steering station cover forward latch was broken off and the aft latch was seized so that cover could not be removed. RECOMMEND repair as required.
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 attend to at next dry dock period.
4. The starboard side dripless propeller shaft seal appears to be leaking based upon rust streaks in the bilge area beneath the seal. RECOMMEND inspect and service seal at next dry docking.

APPRAISAL

<i>Opinion of Fair Market Value:</i>	\$5,950,000
<i>Opinion of Replacement Cost New:</i>	\$9,242,000
<i>Opinion of Fair Market Value of Tender:</i>	\$43,500
<i>Opinion of Replacement Cost New of Tender:</i>	\$77,000

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. 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. 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 9/2020 it was 213.1. The formula for the current value is:

$$\text{Current Value} = (\text{Current Index} / \text{Base Index}) \times \text{Cost}$$

Using this formula:

$$\text{Current Value} = 213.1/186.7 \times \$8,100,000, \text{ or } \$9,242,101 \text{ (rounded down to } \$9,242,000)$$

- E. For the Cost Approach calculations I assumed a replacement cost of \$9,242,000, a current Effective Age of 11, a Normal Useful Life of 30 years, and a residual salvage value of \$250,000.

¹ <https://fred.stlouisfed.org/series/PCU336611336611A>

F. The calculation of Fair Market Value by the Cost Approach, with only Physical Obsolescence (depreciation) considered is as follows:

Current Replacement Cost New	\$9,242,000
Less Terminal Value	<u>- \$250,000</u>
	\$8,992,000
Less depreciation ($8,992,000 \times .366$)	<u>-\$3,291,072</u>
	\$5,700,928
Plus Terminal Value	<u>+ \$250,000</u>
	\$5,950,928

G. Deducting the residual salvage value, applying straight-line depreciation for 19 years, then adding back the salvage value resulted in a Fair Market Value of \$5,950,928, rounded down to \$5,950,000.

A. 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.

B. The following Extraordinary Assumptions were made regarding the valuation:

- The condition of the underwater body and running gear supports the appraisal values.

C. No Hypothetical Conditions were assumed.

D. 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 through 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 06/MAY/2020 expires 31/MAY/2021.
- 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.

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

- 1. Appraisal Certification
- 2. Survey Terms and Conditions

9/04/2020
Effective Date



APPRAISAL CERTIFICATION

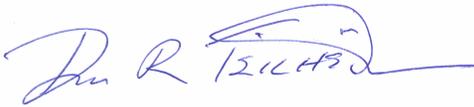
TEICHEIRA MARITIME SURVEYORS, INC.
FILE NO.: 20041 VESSEL: P/V "DRAKE"

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have performed the following services services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.

C&V / Appraisal report 12/29/2018

- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- I have made a personal inspection of the property that is the subject of this report.
- No one provided significant personal property appraisal assistance to the person signing this certification.



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

10/21/2020
Date



TERMS AND CONDITIONS

Teicheira Maritime Surveyors, Inc. (hereinafter referred to as TMS) agrees to undertake the work requested by Customer only on the following terms and conditions which shall apply to all work done by TMS and all reports relating to such work.

1. Additional Services: Any additional work requested or authorized by Customer, either verbally or in writing shall be subject to these terms and conditions. Additional work performed will be charged at TMS's normal hourly rate.

2. Expenses: Customer shall pay TMS all costs, including but not limited to travel expenses, hotel, meals, lodging, telephone and telex, relating to the work requested.

3. Payment and Interest: Payment of all fees and expenses shall be due upon completion of the work unless other arrangements in writing are made. All payments, if unpaid when due, shall bear interest at the rate of 1.5% per month from the date due until paid.

4. Lien: Customer grants to TMS a lien (including a maritime lien) on the vessel and its equipment involved in this work order until all fees and expenses have been fully paid. Customer, including the vessel, and/or the person directly contracting TMS for this work remain separately responsible for the charges until fully paid. The person signing this work order warrants that he/she has authority to bind all such parties to these fees and expenses.

5. Limited Report: Customer is cautioned that this is a limited report representing a limited inspection by visual means and soundings. Inspection of areas normally concealed, areas requiring disassembly of the vessel, scaling of masts, or the operation of equipment is specifically not included unless otherwise agreed upon in writing. Such reports constitute only statements of opinion and are not to be construed or considered as representations, warranties or guarantees. TMS disclaims any expertise regarding insurance. Any statements made by surveyor are not to be construed in any way as bearing upon the possible existence of insurance coverage.

6. Limited Liability: TMS shall not be liable to Customer for any claim, loss, cost, penalty, or damages of whatsoever kind or nature arising out of, in connection with, or incident to the work requested, except that caused by the direct sole negligence of TMS. Negligence shall not be legally presumed but must be affirmatively established. Such liability shall continue for a period of not more than six (6) months from completion of the work or the date of any report prepared by TMS, whichever occurs earlier. TMS shall not be liable in any event, including that caused by the direct sole negligence of TMS, for any loss, cost, penalty or damages in excess of \$1,000.00.

TMS shall not be liable to Customer except on the limited basis identified above. TMS shall specifically not be liable for incidental, special or consequential damages, nor loss of use, loss of profits/earnings, crew wages, shares, salvage, repair, tug expense, demurrage, loss of time, loss of freight, loss of charter and/or similar and/or substituted expenses.

In addition, TMS shall not be liable to Customer on any legal basis or theory other than as stated above. Liability to Customer's insurers to be specifically agreed by Customer and TMS to be excluded.

It is understood by Customer that TMS's charges for services are based upon this limited liability. TMS agrees to assume additional liabilities only if requested by Customer, and agreed to by TMS and a written agreement setting forth liabilities and additional charges are signed by both TMS and Customer.

7. USCG: The USCG and other government agencies may require additional equipment and/or modifications to the vessel depending upon its use. TMS shall not be liable for anticipation of these requirements.

8. Markings: TMS assumes no legal or financial liability for any cosmetic work necessary to remove marks or blemishes caused by the inspection.

9. Notice, Claim, Time Limits or Suit: TMS shall in no event be liable even on the limited basis identified above, unless notice of claim thereof is presented in writing to TMS within ninety (90) days of completion of the work, or preparation of the report, whichever occurs earlier. Customer must also commence suit on any claim or controversy arising under this work order or the work performed pursuant to the work order, within six (6) months from completion of work or preparation of the report, whichever occurs earlier. If Customer fails to do either then TMS is discharged from all liability to Customer on any basis.

10. Law and Venue: Any work performed by TMS and any reports issued by TMS shall be construed in accordance with general maritime law of the United States and the laws of the State of California. Any action, claim, or suit between the parties must be brought in the State of California, City and County of San Francisco including any Federal Court located therein.

11. Specifications: TMS shall not be liable for the accuracy of dimensions, capacities, ratings, equipment, inventory, etc. This data is often obtained from outside sources and is included for general descriptive purposes only.

12. Amendments: This agreement may be modified only in writing, signed by TMS and Customer in interest at the time of the modification.

13. No Prior or Other Agreements: This agreement contains all agreements between TMS and Customer with respect to any matters mentioned herein, and no other prior or contemporaneous agreement or understanding shall be effective.

14. Notice of Non-Reliance: It is expressly agreed to between TMS and Customer, and **Notice to any Third Person(s) or Entity(s) is hereby given**, that any work done, and or report prepared, arising from this work order is done solely for Customer and shall not be relied upon by any third person(s) or entity(s)