



FPSO BARGE

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EAGLE 2 IS A TOTALLY REFURBISHED VERSATILE FLOATING PRODUCTION STORAGE OFFSHORE BARGE FRESH OUT OF DRY DOCK POSSESSING A NEW SET OF CERTIFICATES INCLUDING RENEWED CLASSIFICATION



CAPABILITIES

- Degassing up to 6500 Bpd with its three-stage separator
- Compressing 5 mmscf/day natural gas and discharging ashore @ 275 psi
- Store up to 8500 Barrels with pump capacity exceeding 27,000 Bpd @ 700 psi
- Heat Medium with BTU of 750,000 raise product temperature up to 250 degrees F
- Well Testing utilizing large calibration tanks
- Four-point mooring capability
- Fully outfitted accommodation for up to six crew

PRINCIPAL DIMENSIONS

- LOA 150 ft / 46 M
- Beam 60 ft (18.29)
- Depth 15 ft (4.57)
- Draft 2 ft - 12ft (.6 - 3.6m)
- Gross Tons 1069
- Net Tons 320
- 10,000 bbl storage
- Two 21 stage cargo pumps
- Two stage gas compressor (5 million cubic foot compressed gas per day)





BUILT IN ALABAMA IN 2001 TO THE AMERICAN BUREAU OF SHIPPING (ABS) THE DOUBLE-HULL JONES ACT 150 FT BARGE HAS JUST UNDERGONE A MAJOR MULTIMILLION-DOLLAR OVERHAUL AND IS NOW READY TO WORK UNINTERRUPTED FOR YEARS.



OPERATIONS



LOADING

Once the barge is securely moored in position using its fore and aft dual drum winches equipped with 1000 ft of 1 ½" wire rope, crude oil supply hose from the well(s) manifold is securely bolted to 8" inlet pipe located on the port bow.

DEGASSING

Oil is directed to a three-phase horizontal Bulk Separator, that will separate the gas from the oil. The Bulk Separator is designed to process fluid at a rate determined by the client's capacity or specifications, not to exceed 5 MMSCFD of gas and 6500 BPD of oil. Gas and oil volumes are metered individually to accurately measure the product entering Eagle II. An orifice meter is used to measure gas as it flows to the vent scrubbing machine. The oil volume is measured with a turbine meter. The system is designed to separate water which is dumped under level control to the cargo tanks for storage or mix of oil and water can be directed to the cargo tanks.





COMPRESSION

The gas is routed to a two-stage gas compressor driven by an eight-cylinder gas engine. Gas is first cooled via forced air flowing over finned tubes prior to being measured and discharged at pressures up to 275 psi to shore via a 4 riser.

CRUDE OIL

Oil discharged from the separator/degasser is routed to anyone of eight cargo tanks comprising a total storage capacity of up to 8500 bbl. Alternatively, if well testing, the oil can be discharged to two 150 bbl Calibration tanks.





DISCHARGE

Crude oil from cargo tanks is drawn up and pumped ashore by two 21 stage Fisher pumps driven by V8 diesels. Each pump has the capacity to pump 13,500 bbls per day @ 700 psi

HEAT MEDIUM

The viscosity of the crude oil can be significantly reduced by utilizing a closed loop hot oil circulating system (>250 degrees Fahrenheit) transferring heat via a large heat exchanger and 2" coils secured at bottom of cargo tanks.





POWER GENERATION

One sound suppressed 500 KW diesel generator producing 480v/3ph/60cycle power and one 150kw diesel generator provide electrical power to switch gear, main 480v breaker panel, step down transformer and 240v low voltage panel.

DIESEL

Diesel generators, fire pump and winch engines are provided diesel fuel via a 4000gallon storage tank and delivered via one of two 2" vertical pumps. Bunkering is only required once a month and is supplied by support vessels.





FRESH WATER

Potable water is stored in a 4200-gallon tank and replenished via supply vessel or from ships reverse osmosis unit capable of generating 1200 gallons per day. One of two circulating pumps delivers FW throughout the vessel including crew accommodations.

AIR COMPRESSORS

One two stage piston air compressor (60 cfm) and one screw type (100cfm) provide continuous air pressure for either utility purposes or dried of condensation to supply instruments.





SAFETY

All electric motors are ex-rated. LEL and UEL gas detectors are located throughout the deck and living quarters; all critical pressures, temperatures, and tank levels are continuously monitored via a Programmable Logic Controller (PLC) with parameters set to automatically activate alarms or initiate an emergency shutdown via pneumatically controlled actuators.

Firefighting is accomplished utilizing ABC portable extinguishers, fixed Co2 system, fixed dousing, or use of foam and seawater disbursed from five fire hose reels. Lifesaving gear includes two 6-man fixed rafts and one 6-man inflatable. EPIRB, lifejackets and rescue boat dingy with outboard.

ACCOMMODATIONS

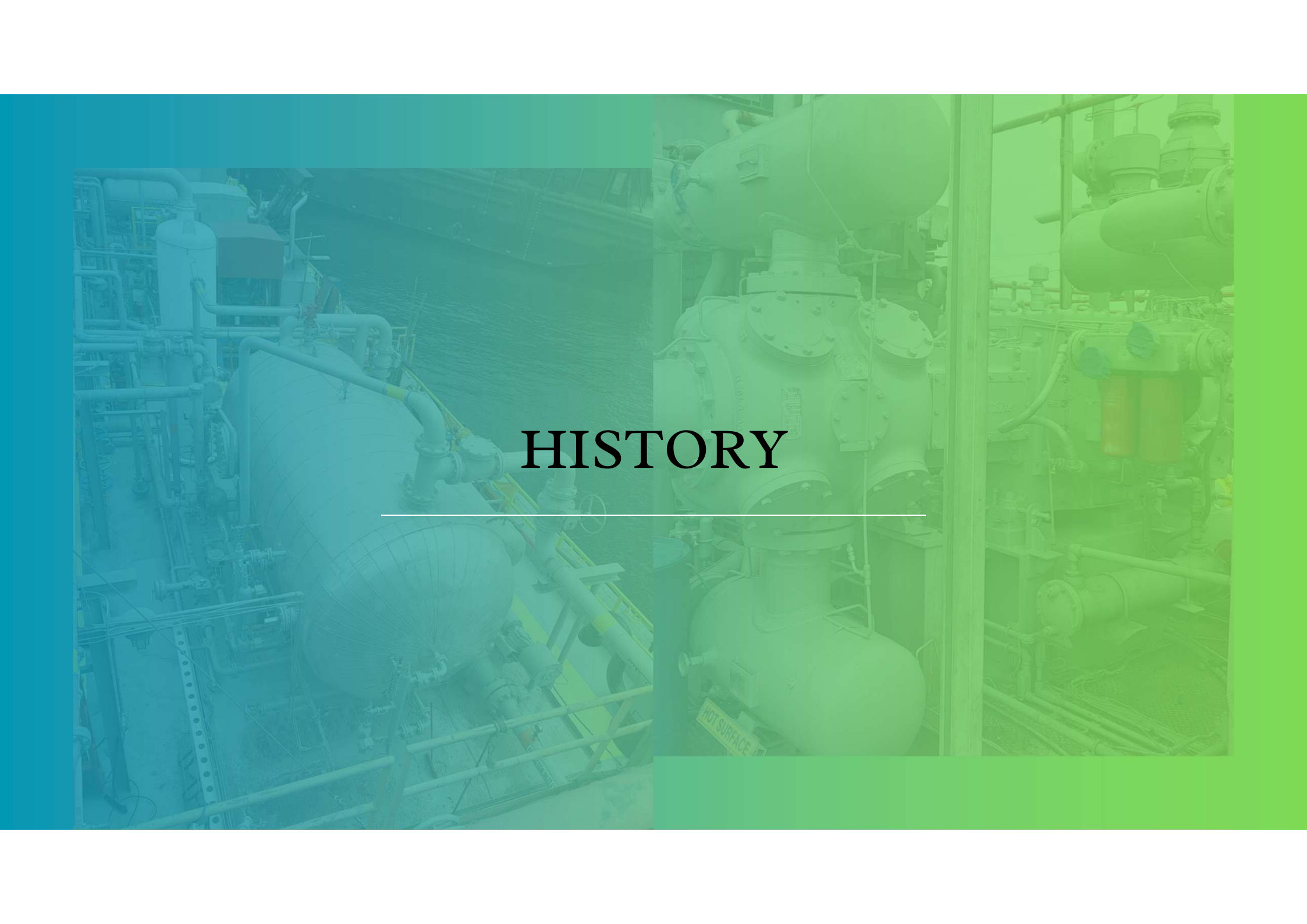
Fully air-conditioned large galley with freezer with ice machine, fridge, electric stove, large pantry and under-sink RO for drinking water. Separate sleeping quarters for 4 crew, separate head with shower, washer dryer, water heater and ample storage space. Separate crew lounge with two additional bunks. One additional toilet on deck.



MARINE SANITATION DEVICE (MSD)

US Coast Guard Type II sewage treatment plant sufficient for up to 12 persons.





HISTORY

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- Built in 2001 to ABS standards as a double-hull FPSO barge
 - Equipped with 3-stage degasser/separator
 - 2003: Upgraded with a natural gas compressor, to enable the separated gas to be captured, compressed and pumped ashore.
 - 2013: New owners dry-dock and refurbished with new equipment and hull plating
 - The vessel was then deployed offshore and processed crude oil continuously for approximately five years until 2018 when it was removed from service and 'laid up' until 2022.
 - 2022 – 2023 vessel was sold and completely refurbished. During drydock the hull was blasted to bare metal and repaired with seven tons of new hull plating. All machinery, valves, structures, and electrical distribution systems were disassembled and rebuilt or replaced with new equipment.
 - Crew accommodations were upgraded and all diesel engines rebuilt including natural gas engine. All critical equipment independently tested and recertified.



CERTIFICATION

All critical equipment inspected and certified by licensed third party specialist contractors or government agencies including Trinidad Maritime Flag Administration, Compliance to Int'l standards audited by classification society, Int'l Register of Shipping; Additional certifications issued by Ministry of Health, Occupational Safety and Health Agency (OSHA), Ministry of Energy audit of Safety Management System that complies with Safe to Work (STOW) protocols for high risk activities, Trinidad and Tobago Fire Department.

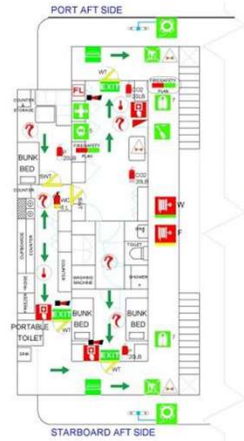


FINANCIAL CONSIDERATIONS

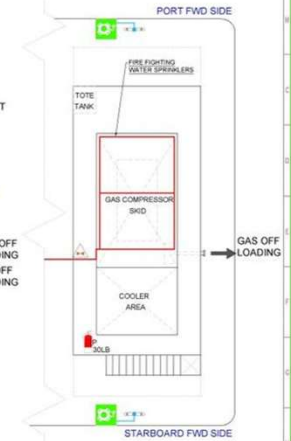
- ✓ Fast deployment – reduce time - product to market
- ✓ Lower cost to set up – no expensive platforms construction or installation costs
- ✓ Minimizes need for underwater infrastructure – no pipe lines to shore storage
- ✓ Allows for marginal oilfields to remain viable
- ✓ Mobility increases operational efficiency
- ✓ Costs less to demobilize.
- ✓ FPSOs are environmentally friendly – no fixed structures required

EAGLE II - FIRE & SAFETY CONTROL PLAN

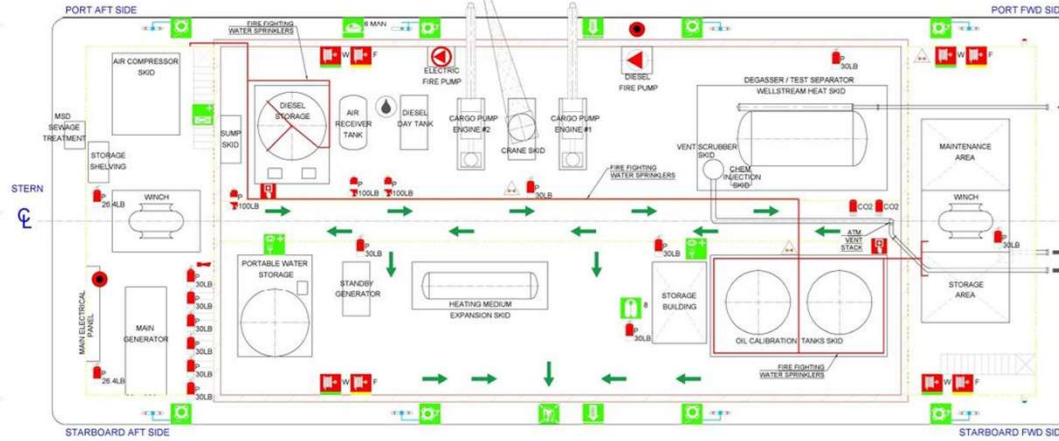
ACCOMMODATION AREA PLAN VIEW



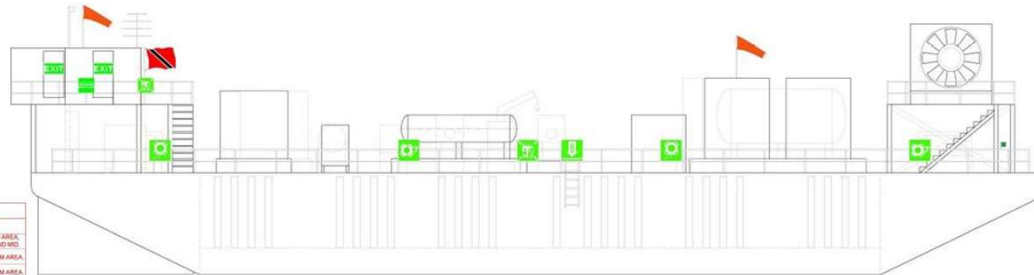
GAS COMPRESSOR AREA PLAN VIEW



MAIN DECK PLAN VIEW



PROFILE VIEW



LEGEND			
SYMBOL	QTY	DESCRIPTION	LOCATION
[Symbol]	6	EMERGENCY SHUT DOWN SWITCHES	ACCOM. AREA A, U, ACCOM. AREA, MAIN DECK PORT FWD AND MID, AFT MAIN DECK, U, ACCOM. AREA
[Symbol]	1	MAIN (DIESEL) FIRE PUMP	AFT MAIN DECK, U, ACCOM. AREA
[Symbol]	1	EMERGENCY (ELECTRIC) FIRE PUMP	AFT MAIN DECK, U, ACCOM. AREA
[Symbol]	5	FIRE HOSE, WELLS AND NOZZLE, WATER AND FOAM	MAIN ACCOM. AREA
[Symbol]	2	CO ₂ EXTINGUISHER	ACCOM. AREA, U, ACCOM. AREA, MAIN DECK PORT FWD, MID, AFT & U, MAIN DECK AFT STAIRCASE (U, B, U, ACCOM. AREA, MAIN DECK AFT)
[Symbol]	13	30LB POWDER EXTINGUISHER	MAIN ACCOM. AREA
[Symbol]	2	30LB POWDER EXTINGUISHER (H)	MAIN ACCOM. AREA
[Symbol]	1	30LB WHEELED POWDER EXTINGUISHER	AFT MID MAIN DECK
[Symbol]	1	WET CHEMICAL (Flam. Retardant) EXTINGUISHER	GALLEY AREA
[Symbol]	1	CO ₂ EXTINGUISHER	FWD, MID AREA, MAIN DECK
[Symbol]	1	ALARM PANEL	MAIN ACCOM. AREA
[Symbol]	2	START/STOP FOR FIRE PUMPS	AFT MAIN DECK, U, ACCOM. AREA
[Symbol]	5	MANUAL PULL STATION	ACCOMMODATION AREA, GALLEY, MAIN DECK CENTER FWD & AFT
[Symbol]	1	GENERAL ALARM / ALERT HORN	U, ACCOMMODATION AREA
[Symbol]	3	ALERT HORN WITH STROBE	ACCOMMODATION AREA
[Symbol]	1	SCOPED SPILL KIT (88 GALLON)	MAIN DECK
[Symbol]	4	SPACE MONITORED BY HEAT DETECTORS	ACCOM. U, U, ACCOM. AREA, GALLEY
[Symbol]	4	SPACE MONITORED BY SMOKE DETECTORS	ACCOM. U, U, ACCOM. AREA, GALLEY
[Symbol]	2	B CLASS FIRE DOOR (SEMI-WATERTIGHT)	INTERNAL ACCOM. AREA, PORT GALLEY AREA, PORT & STBD ACCOM. AREA, STBD GALLEY AREA
[Symbol]	3	B CLASS FIRE DOOR (WATERTIGHT)	STBD GALLEY AREA

LEGEND			
SYMBOL	QTY	DESCRIPTION	LOCATION
[Symbol]	2	BUOYANT APPARATUS	PORT & STBD, MAIN DECK
[Symbol]	1	LIFERAFT FOR 6 PERSONS	STBD, SIDE, MAIN DECK
[Symbol]	4	LIFEBUOY WITH LINE	2 - PORT BIDDINGS & FWD, 2 - STBD, MIDBIDS & FWD
[Symbol]	4	LIFEBUOY WITH LIGHT	2 - PORT BIDDINGS & AFT, 2 - STBD, MIDBIDS & AFT
[Symbol]	22	LIFELINE (HOTS)	EXTERNAL ACCOM. AREAS (B, B, MAIN DECK STORAGE (H))
[Symbol]	3	MUSTER POINT	PORT & STBD, TOP OF STAIRCASE, MID STBD, SIDE
[Symbol]	1	E P.I.R.B.	EXTERNAL FRONT PORT SIDE OF MAIN ACCOM. AREA
[Symbol]	2	EMBARCATION LADDER	PORT & STBD, MID MAIN DECK, STBD, SIDE, FWD, MAIN DECK, PORT SIDE, MAIN DECK, AFT BIDDINGS
[Symbol]	1	STRETCHER	MAIN ACCOM. AREA
[Symbol]	1	MEDICAL LOCKER	MAIN ACCOM. AREA
[Symbol]	5	SCBA	ACCOMMODATION AREA (B)
[Symbol]	2	EYE SHOWER	MAIN DECK STBD BIDDINGS, AFT STBD, AREAS
[Symbol]	1	FIRE CONTROL & SAFETY PLAN	MAIN ACCOM. AREA
[Symbol]	1	FIRE CONTROL & SAFETY PLAN (WATER TIGHT COFFERDAM)	EXTERNAL FRONT PORT SIDE OF MAIN ACCOM. AREA

LEGEND	
DESCRIPTION	LOCATION
1. FIRE LOCKER CONTENTS	ALL FIRE LOCKER EQUIPMENT IS LOCATED IN THE COFFERDAM ON THE PORT SIDE OF THE MAIN ACCOMMODATION AREA
1. FIRE PROTECTIVE SUIT	
1. FIREMAN'S HELMET	
1. PAIR OF FIREMAN'S BOOTS	
1. PAIR OF FIREMAN'S GLOVES	
1. SAFETY HARNESS	
1. FIREMAN'S AXE	
1. BREATHING APPARATUS	
1. SPARE BOTTLE	

VESSEL NAME	EAGLE II
VESSEL TYPE	FP50
FLAG	TRINIDAD & TOBAGO
IMO #	7730015
GRT	1069
LOA	150 FT
BOA	60 FT
DEPTH	15 FT
DATE OF BUILD	2001
DATE OF PLAN UPDATED	1 st September, 2023

EAGLE II BARGE			
UPDATED FIRE & SAFETY PLAN			
DATE	1 st September, 2023	REVISION	1/1
NO.	000-01-004	DATE	1/1

AVAILABLE

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EAGLE II