

# HARVEY GULF INTERNATIONAL MARINE

## Demands of LNG Fueled Vessels



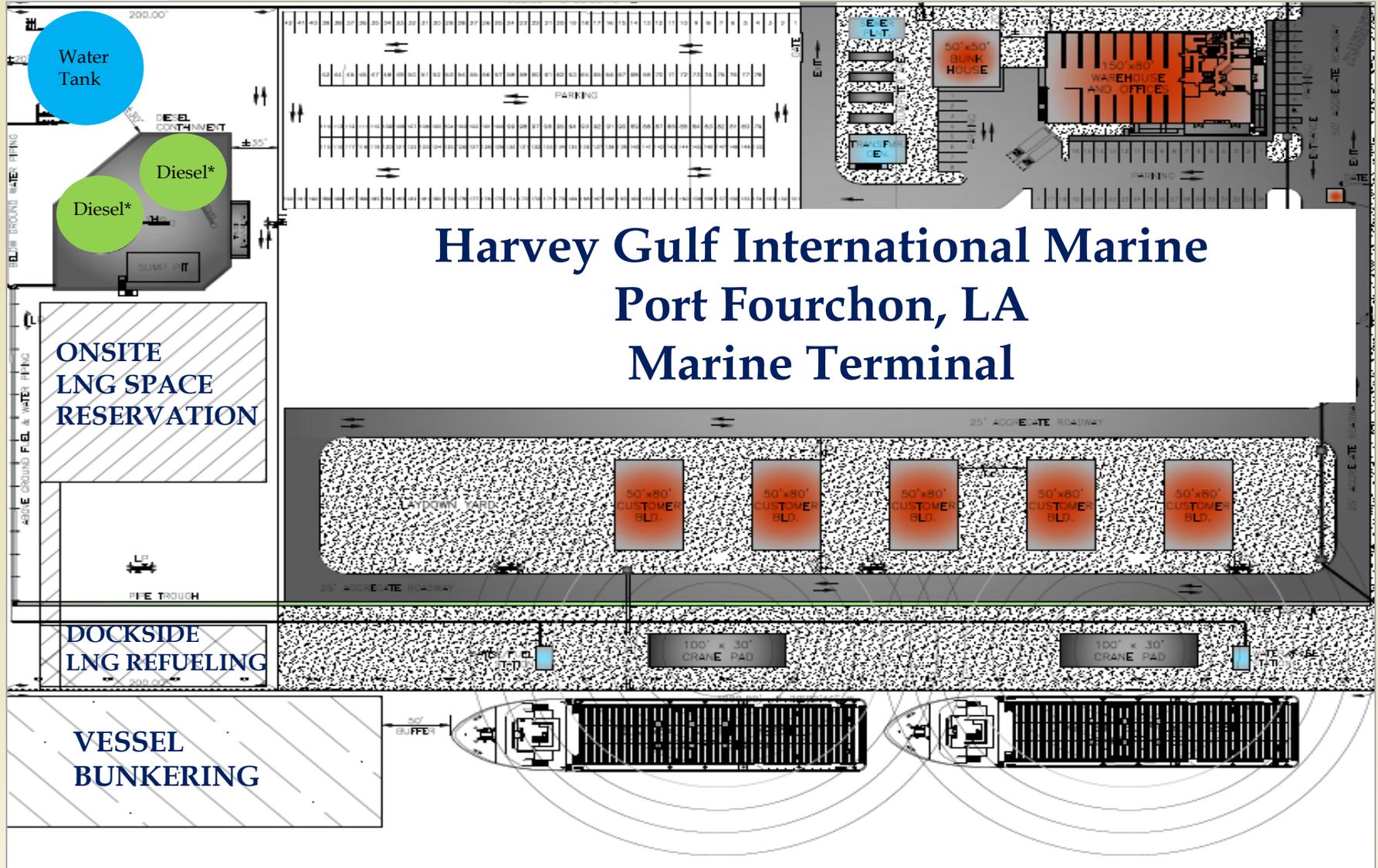
Chad Verret  
Senior Vice President

Cleveland SNAME Meeting  
2/24/2012

# Company Commitment

- ▣ To develop vessels that would exceed the demands of customers and support their environmental commitments
- ▣ To develop vessels with the best possible emissions profile to meet the developing international and domestic air quality regulations

# LNG Bunkering Options



## Harvey Gulf International Marine Port Fourchon, LA Marine Terminal

\* Each Diesel Tank holds 10,000 BBLs

**PRINCIPAL PARTICULARS**

LOA 302'-0"  
 LBP - LWL 290'-0"  
 BEAM (MOLDED) 64'-0"  
 DEPTH 24'-6"  
 SUMMER LOADLINE DRAFT 20'-4 1/2"  
 GENERATORS (3) X 2510KW @ 720 RPM  
 TOTAL KILOWATTS 7,530 KW @ 690 VAC/ 60Hz  
 MAIN PROPULSION (2) X 2,700KW @ 690 VAC @ 1,200 RPM (7,241HP TOTAL) FIXED PITCH VFD Z-DRIVE IN NOZZLES  
 BOW THRUSTERS (2) X 1,280 KW @ 690 VAC @ 890 RPM (3,433HP TOTAL) FIXED PITCH VFD/REVERSING MOTORS  
 FIRE MONITORS (2) x 5284 GPM/ (495KW @ 690 VAC) 665HP/400' REACH - REMOTE CONTROLLED FIRE MONITORS  
 REGULATORY USCG SUB I & L /SOLAS/ABS \*A1, OFFSHORE SERVICE VESSEL, \*AMS, \*DPS-2, \*ACCU, ENVIRO+, GP, UWILD, FFV-1, GFS(DUAL FUEL DIESEL), ©

**SUMMARY TABLE**

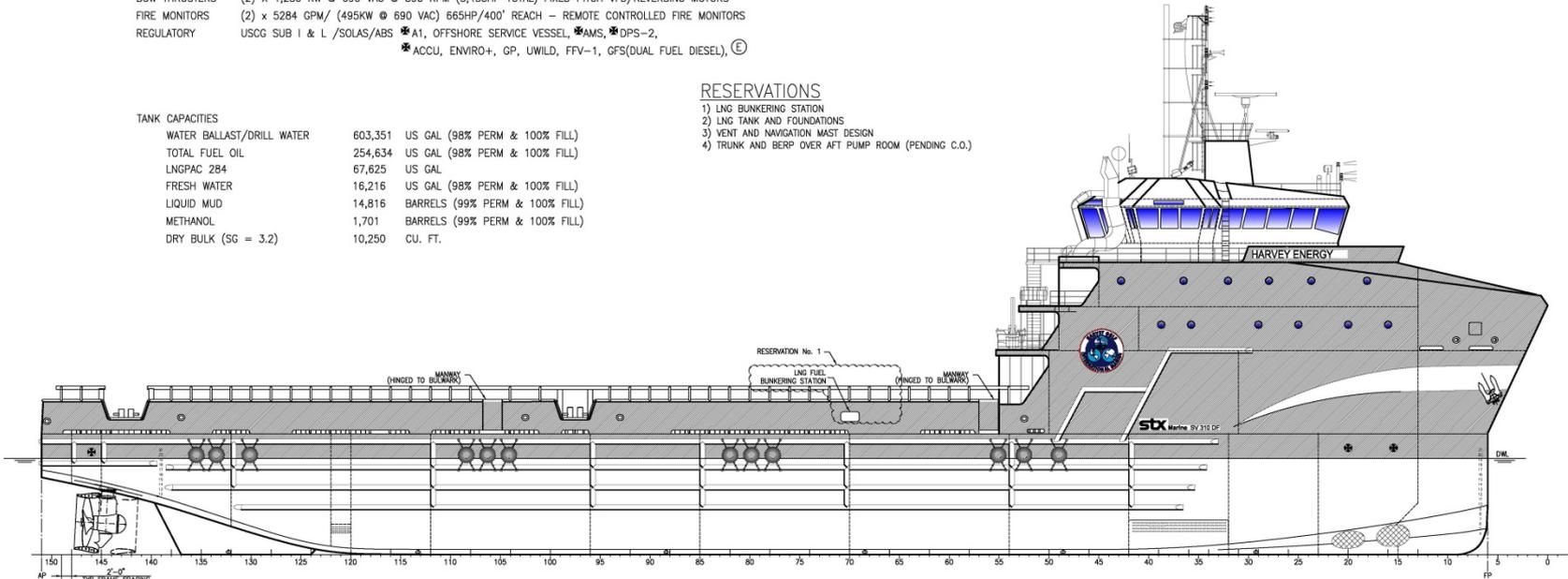
ACCOMMODATIONS 46+3 (SICK BAY)  
 STATEROOMS 21  
 HEADS 24  
 LOUNGE 1  
 LAUNDRY AREA 2  
 GALLEY 1  
 MESS AREA 1  
 SICK BAY 1 x 3 PERSONS

**TANK CAPACITIES**

WATER BALLAST/DRILL WATER 603,351 US GAL (98% PERM & 100% FILL)  
 TOTAL FUEL OIL 254,634 US GAL (98% PERM & 100% FILL)  
 LNGPAC 284 67,625 US GAL  
 FRESH WATER 16,216 US GAL (98% PERM & 100% FILL)  
 LIQUID MUD 14,816 BARRELS (99% PERM & 100% FILL)  
 METHANOL 1,701 BARRELS (99% PERM & 100% FILL)  
 DRY BULK (SG = 3.2) 10,250 CU. FT.

**RESERVATIONS**

- 1) LNG BUNKERING STATION
- 2) LNG TANK AND FOUNDATIONS
- 3) VENT AND NAVIGATION MAST DESIGN
- 4) TRUNK AND BERP OVER AFT PUMP ROOM (PENDING C.O.)



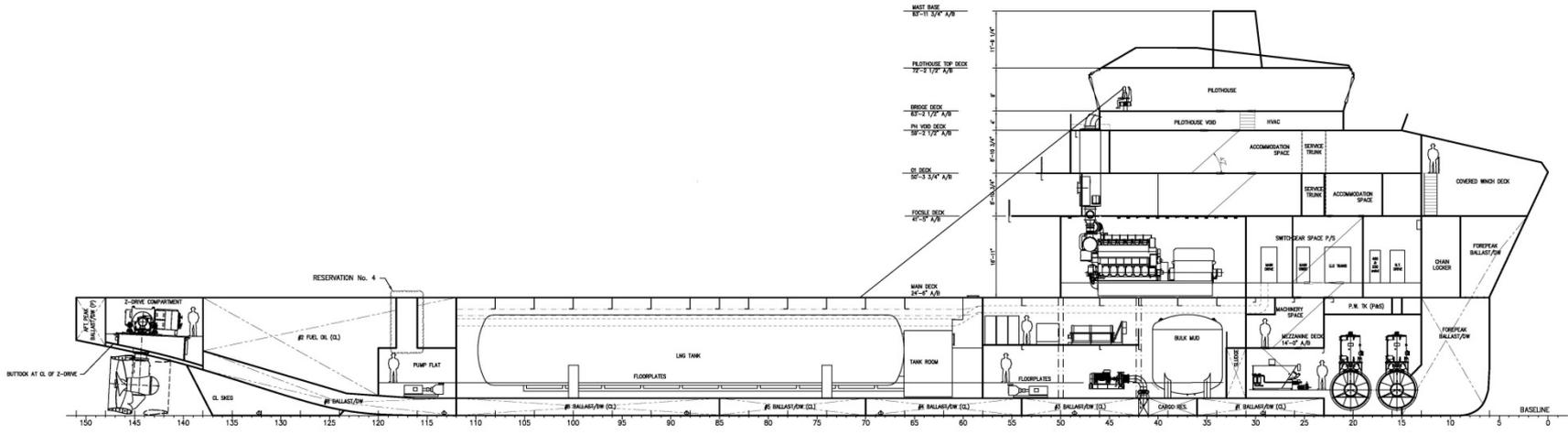
**OUTBOARD PROFILE**

| REVISIONS |                      |    |        |      | REFERENCES |         |       |  |  |
|-----------|----------------------|----|--------|------|------------|---------|-------|--|--|
| NO.       | DESCRIPTION          | BY | APPROV | DATE | NO.        | DWG NO. | TITLE |  |  |
|           |                      | NC | MC     | DATE |            |         |       |  |  |
| 0         | INITIAL ISSUE TO ABS |    |        |      |            |         |       |  |  |

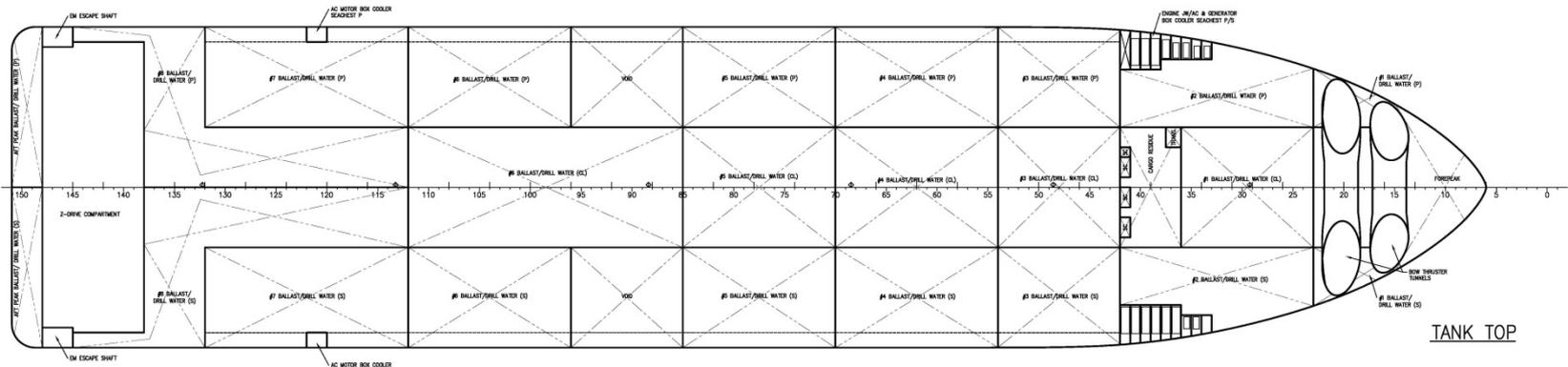
  

|  |                    |   |  |
|--|--------------------|---|--|
|  |                    |   |  |
| STX Canada Marine Inc. Houston, TX<br>Vancouver BC Tel: +1 604 218 3380  |                    | STX US Marine Inc. Houston, TX<br>Tel: +1 713 981 2012                              |  |
| ACCORDING TO INTERNATIONAL LAWS, THIS DRAWING IS THE PROPERTY OF STX CANADA MARINE INC. AND IS LOANED TO YOU. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT OUR WRITTEN CONSENT. |                    |   |  |
| APPROVALS<br>TY _____ CLASS _____<br>OWNER _____ FLAG _____  |                    | HARVEY GULF INTERNATIONAL MARINE<br>302' DUAL FUEL CLASS PSV<br>GENERAL ARRANGEMENT |  |
| SCALE: 3/32"=1'-0"   | DATE: 01/31/2011   | TO DWG NO. 1073-10112-00  |  |
| DRAWN BY: NC   | CHK'D BY: MC       | SHEET 1 OF 4  |  |
| HULL NO.: TD-73,70-74  | JOB NO.: 1073/1074 | REV: 0  |  |

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



INBOARD PROFILE



TANK TOP

**stx** Canada Marine  
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**TRINITY**  
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HOUSTON, TX 77058

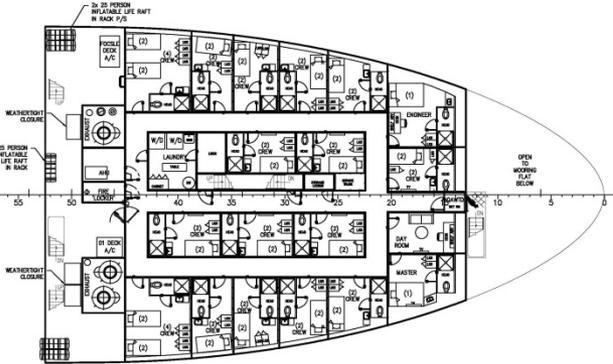
HARVEY GULF INTERNATIONAL MARINE  
302' DUAL FUEL CLASS PSV  
GENERAL ARRANGEMENT

|             |             |                       |                    |                          |
|-------------|-------------|-----------------------|--------------------|--------------------------|
| APPROVALS   |             | SCALE: 3/32"=1'-0"    | DATE: 01/31/2011   | TO DWG NO. 1073-10112-00 |
| TY _____    | CLASS _____ | DRAWN BY: NC          | CHKD BY: MC        | SHEET 2 OF 4             |
| OWNER _____ | FLAG _____  | HULL NO.: 70-73,70-74 | JOB NO.: 1073/1074 | REV 0                    |

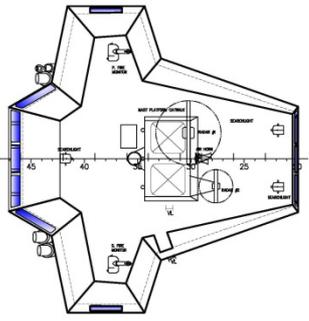
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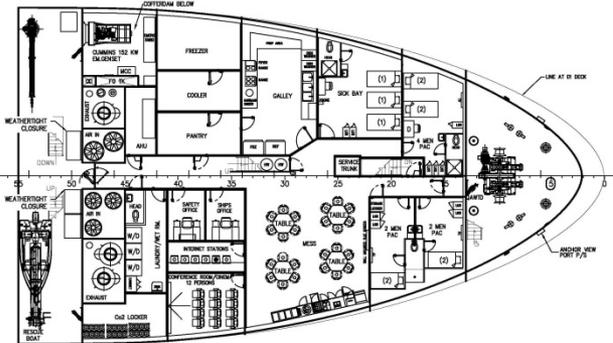
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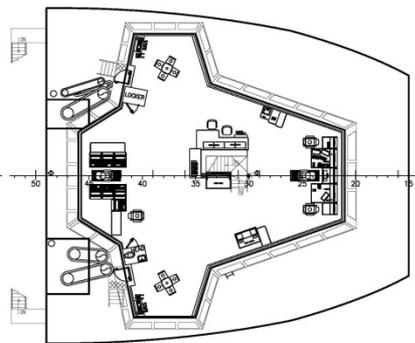
**01 DECK**  
50'-3 3/4" ABL



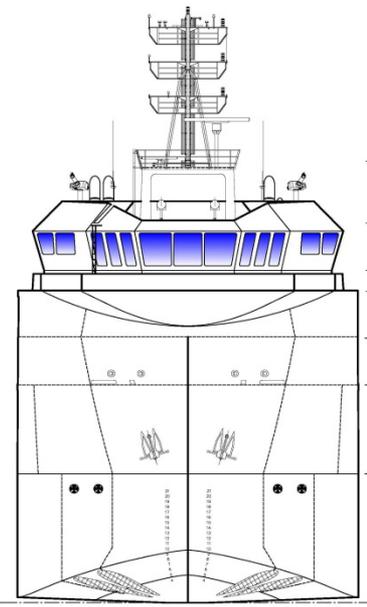
**PILOT HOUSE TOP DECK**  
83'-11 3/4" ABL



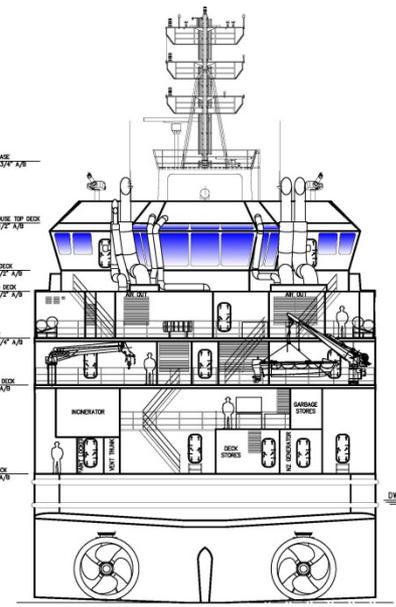
**FOCLE DECK**  
41'-5" ABL  
8 BERTHS (PAC)  
3 BERTHS (SICK BAY)



**BRIDGE DECK**



**BOW VIEW**



**STERN VIEW**

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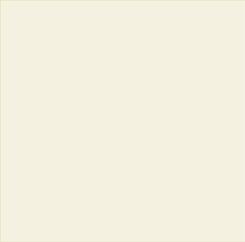


HARVEY GULF INTERNATIONAL MARINE  
302' DUAL FUEL CLASS PSV  
GENERAL ARRANGEMENT

|                       |                    |                          |
|-----------------------|--------------------|--------------------------|
| SCALE: 3/32"=1'-0"    | DATE: 01/31/2011   | TO DWG NO. 1073-10112-00 |
| DRAWN BY: NC          | CHK'D BY: MC       | SHEET 4 OF 4             |
| HULL NO.: 70-73,70-74 | JOB NO.: 1073/1074 | REV 0                    |

APPROVALS  
TY \_\_\_\_\_ CLASS \_\_\_\_\_  
OWNER \_\_\_\_\_ FLAG \_\_\_\_\_

8 7 6 5 4 3 2 1



# Conclusion

- ❑ Despite some of the higher initial costs and design challenges, LNG fueled vessels are still a very attractive option.
- ❑ Harvey Gulf believes that the use of LNG fueled vessel will continue to provide company growth by continuing to meet customer demands.
- ❑ Harvey Gulf anticipates that LNG fueled vessels will maintain and enhance its competitive advantage.

# Questions?

