APPENDIX A 1

**David A. Hall**

**204, Cooper Drive**
**Wallingford**
**Pennsylvania, PA 19086, USA.**

**Tel: 610-891-0665 Fax 610-891-2725**
**email: dhall@amsca.com**

## Curriculum Vitae (Professional Resume)

Versatile marine consultant and experienced marine surveyor focused on contributing to the overall safety of the marine industry and pollution prevention. Accustomed to working closely with oil companies, admiralty lawyers, vessel owners, salvors, qualified individuals, United States Coast Guard, spill response organizations, classification societies, hull and P&I underwriters, and commercial claims representatives, in support of many different clients with marine interests. Has also worked as a non-exclusive surveyor for a Classification Society and as a Flag State Surveyor. Familiar with the operation of many types of ocean going ships and the carriage and stowage of many types of cargo. Particularly knowledgeable with respect to claims resulting from the operational handling and carriage of crude oil, petroleum products and chemicals. At this time the only surveyor on the US East Coast approved by the Chemical Distribution Institute to carry out safety/condition inspections of chemical tankers on their behalf. Also carries out Ship Inspections of oil tankers on behalf of two major oil companies under the OCIMF/SIRE program.

## Professional Background & Experience

**1997 – to present Marine Consultant**

Provided a wide range of professional consulting services. Obtained accreditation with the Chemical Distribution Institute and OCIMF/SIRE as Woodbridge Marine's East Coast representative. Worked with the Qualified Individual Company on two serious groundings off the coast of Florida. Worked on environmental compliance audit program for a major cruise line. Attended significant container ship fire casualty in Panama on behalf of London insurance interests to catalog and examine salvaged cargo. Operated Quantum Marine LLC for owners who are US P&I Club correspondent/OPA 90 Qualified Individual and carried out many surveys for an IACS member Classification Society. Performed numerous surveys for P&I interests relating to cargo-related problems and casualty situations. Concluded minority interest in Quantum Marine in July 1999 by mutual agreement to pursue career as an independent marine surveyor and consultant.

**1988 - 1997 President and owner of Quantum Marine, Inc.**

In January 1988 founded Quantum Marine, Inc. to provide specialty consulting and survey services to P&I clubs, oil companies, traders, ship owners and insurance interests. Company operated with 12 employees and achieved annual sales well in excess of $1 million. Continued to work for many clients as a port captain and operational expediter, vessel condition surveyor, cargo surveyor, marine consultant and expert witness. While continuing to work in the field supervised Quantum Marine's staff of ten full time surveyors who attended on board most types of vessels and conducted many types of surveys. The company gained a reputation for being expert with respect to cargoes of many types including petroleum and chemicals. Sole shareholder of Quantum Marine, Inc. and managed the company so that the quality of the work was always the paramount consideration. During this period worked with a number of trusted associates who provide quality services throughout the United States, Canada, South America,

Europe, West Africa and the former Soviet Union. Sold assets of Quantum Marine, Inc. in January 1997.

**1982 - 1987 Manager with Caleb Brett USA, Inc. (Marine Technical Division)**

Left the British Merchant Navy and joined Caleb Brett USA Inc. as a surveyor with their Marine Technical Division in Philadelphia. In 1983 took over as manager of the Marine Technical Division on the East Coast. Personally attended several hundred tanker vessels as port captain for Gulf Oil Company and for cargo loss control and expediting purposes. In the course of these duties attended numerous bunker surveys and shore terminal inspections. Gained familiarity with petroleum inspection procedures, oil terminal custody transfer operations, cargo inspection requirements and the chartering criteria of a number of major oil companies and traders. In 1983, assumed responsibility as manager of Caleb Brett's Marine Technical Division (MTD) for the East Coast and Canada. Attended many vessels for the purpose of protecting owner's interests. Responsible for coordinating the activities of ten marine surveyors with Masters licenses and signing off on their reports.

## Service at Sea

**1977 - 1982,** Joined Bibby Line in 1977 and served as Chief Officer on a 169,000 DWT ore/bulk/oil vessel. Joined Canadian Pacific (CP Ships) in 1978 as Chief Officer and served on product tankers and a shuttle tanker loading from the AMOCO Montrose Alpha field in the North Sea. Gained dangerous cargo endorsements for petroleum and chemicals and attended various short courses for chemical tanker safety, inert gas systems, and crude oil washing. In 1980 assigned to chemical tanker new building program in Mizushima, Japan working with steel inspectors and company superintendents, reporting to the company's naval architects in London. Assisted with fitting out of two vessels and then sailing them from the yard. Developed operating procedures and planned maintenance schedules for these new vessels. Sailed on all four new buildings taking one to guarantee dry dock. Worked on tank coating and vessel damage stability issues during initial operating period of fleet. Left sea employment to be with family on a more regular basis and due to concern at lack of long-term prospects when employer indicated intention to sell entire fleet.

**1965-1977,** After completing Grammar School near London, joined London & Overseas Freighters as an apprentice officer. During four-year apprentice-ship sailed on a tween deck cargo ship, tankers and a bulk carrier. After attending Sir John Cass College in London obtained foreign going second mates licence in 1969 and sailed as 3rd officer on a break-bulk cargo ship and an oil tanker. In 1971 after studying again at Sir John Cass College obtained a 1st mates licence and sailed with Turnbull Scott as 2nd officer on a small timber ship trading to the Russian Arctic. In 1972 joined ESSO Petroleum Company Ltd. and sailed on many different types of tanker from 20,000 DWT coastal product tankers to 256,000 DWT VLCCs. In 1976 after studying at Brunel Technical College in Bristol gained an unlimited British Masters Licence for vessels of any tonnage. Before leaving ESSO Petroleum in 1977 to seek better promotion prospects sailed as First Officer on a shuttle tanker performing lightering operations in the English Channel.

**Professional Affiliations**: Member of the Nautical Institute, The Institute of Petroleum, accredited ship inspector with the OCIMF/SIRE program and The Chemical Distribution Institute.

**Short training courses attended**

Gained dangerous cargo endorsements for petroleum and chemicals to masters certificate
Radar Observer
Radar Simulator
Radar (ARPA) course for senior officers
4 Day MNTB fire fighting course at Warsash
Ship Captains Medical Certificate
St. Johns Ambulance First Aid Course for ships officers
5 day Petroleum Tanker safety course
5 day Chemical Tanker safety course, also attended again in Oct. 1999
4 day inert flue gas systems course
1 day Oil Detection Monitoring Equipment course
1 day Crude Oil Wash course
OSHA hazmat course
1-day media course for shipping specialists responding to oil spills
3 - two day OCIMF/SIRE inspector's update courses since 1999 (sponsored by CHEVRON) and two in house courses with CHEVRON
Various short courses in business management and use of computers
Attended Chemical Distribution Institute (CDI) accreditation course in February 1999 at Warsash in UK - passed CDI exam and selected by CDI interview panel for final accreditation process - completed in March 2000. Active CDI inspector who has attended 3 CDI update seminars.

**Hobbies and interests**, Sailing, cycling, photography and reading

## Papers and significant written work

Oil cargo theft - presented to the American Bar Association in New York

Cargo ROB surveys - published in Seaways Magazine

Tanker operations for ship's agents – also presented this as the course instructor during 2 two day courses in Sydney, Australia

Tanker operations for cargo inspectors - written as a manual for a major cargo inspection company

Tanker safety manual - prepared for New York based tanker owner

Procedures manual for marine surveyors

Wrote oil pollution response procedures manual for large oil trading company

## Petroleum & Chemical consulting experience

Assisted underwriters, major oil companies, admiralty lawyers, vessel owners, oil trading companies, terminals and P&I interests with respect to various major claims, custody transfer disputes and casualties. Details and references available upon request.

**Appendix B**

**Hyrdrostatic calculation B 120 for quantity of oil lost in April 2003 incident**

| | Inches | | |
|---|---|---|---|
| Tank height for 2 starboard | 424.00 | A | ITS/Caleb Brett document - our appendix C - 34' 4" converted to inches |
| Ullage in 2 starboard sailing from Eagle Point | 102.25 | B | ITS/Caleb Brett document - our appendix F - 8' 6 1/4" converted to inches |
| Height of cargo above bottom of the tank | 321.75 | C | Derived by A - B |
| Draft (Portion of barge hull that is submerged) | 306.00 | D | ITS/Caleb Brett document - our appendix F - 25' 6" converted to feet and inches |
| Height (head) of cargo in 2 starboard above water line | 15.75 | E | Derived by C - D |
| Amount of cargo in 2 starboard for gauge of 8' 6 1/4" | 10360.82 | F | ITS/Caleb Brett document - our appendix F |
| barrels per inch for 2 stbd | 32.20 | G | Derived by F/C |
| Height of oil that would run from 2 starboard to equalize to water line | 15.75 | E | |
| Calculation of quantitiy of oil in barrels that would immediately run out | 507.17 | H | Derived by G x E |
| US gallons per barrel | 42 | I | |
| Calculation of quantitiy of oil that would immediately run out (US gallons) | 21301 | J | (Probably leaked in the first 30 minutes after the incident) |

The above calculation does not make allowance for the difference in density between the oil and the water. The oil at the interface may have been slightly heavier than water.
If the oil at the interface was slighty heavier than water it would continue to leak in way of the torn tank bottom until such time as a substantial water bottom had formed in the tank.
The calculation ignores the change in draft due to the breached tank - due to the other uncertainties in this calculation it is probably not significant.

**Considerations with respect to further leakage after the initial release**

When a single hull tanker vessel is holed on the bottom and the static head in the tank is relieved by the oil draining out a heel of water forms in the bottom of the tank.
This heel of water will hold the oil floating on it in the breached tank and unless the ship or barge is riding in a seaway no further leakage will occur.
However the B 120's cargo, in way of the interface, may have been slightly heavier than water so the water heel would not form easily and there would be some minor leakage from the vicinity of the damaged bottom plate until such time as it was patched.

Because once the initial 15 3/4 inches of static head had been lost there would be no static pressure forcing oil out of the damaged bottom the flow rate would diminish to a small fraction of the initial rate - it would be limited to what oil dropped from the oil/water interface in the vicinity of the 12' x 2' area of damage.

This said however it has to be acknowledged that there may have been momentary periods when the barge was riding over a sea or swell and when the static head momentarily increased again to the point where some larger amounts of oil were forced out.

APPENDIX B

ITS Intertek Testing Services
Caleb Brett

APPENDIX C

CLIENT REFERENCE

OUR REFERENCE
PH/03-2708

# OBQ REPORT

| VESSEL | CUSTOMER PRODUCT DESCRIPTION | PORT / TERMINAL | DATE |
|---|---|---|---|
| B-120 | No. 6 Oil | AMERADA HESS, D.A. | 04/23/03 |

*SEE ATTACHED WEDGE CALCULATION IF APPLICABLE:

| TANK NO. | ULLAGE | LIQUID / NON-LIQUID / LIQUID-WEDGE | TOV BBLS | FREE WATER INNAGE | FREE WATER VOLUME | G.O.V. BARRELS | TEMP DEG F |
|---|---|---|---|---|---|---|---|
| 1P | 35 - 3 1/2 | NON-LIQUID | 44.91 | NIL | 0.00 | 44.91 | 60 |
| 1S | 35 - 2 3/4 | NON-LIQUID | 80.28 | NIL | 0.00 | 80.28 | 60 |
| 2P | 35 - 4 1/2 | NON-LIQUID | 74.87 | NIL | 0.00 | 74.87 | 60 |
| 2S | 35 - 04 | NON-LIQUID | 29.02 | NIL | 0.00 | 29.02 | 60 |
| 3P | 35 - 03 | NON-LIQUID | 144.81 | NIL | 0.00 | 144.81 | 60 |
| 3S | 35 - 3 1/2 | NON-LIQUID | 140.30 | NIL | 0.00 | 140.30 | 60 |
| 4P | 35 - 3 1/4 | NON-LIQUID | 18.11 | NIL | 0.00 | 18.11 | 60 |
| 4S | 35 - 3 1/4 | NON-LIQUID | 35.64 | NIL | 0.00 | 35.64 | 60 |
| 5P | 34 - 7 1/4 | NON-LIQUID | 157.20 | NIL | 0.00 | 157.20 | 60 |
| 5S | 35 - 0 1/2 | NON-LIQUID | 106.31 | NIL | 0.00 | 106.31 | 60 |

COMMENTS:

LAST 3 CARGO
No. 6 Oil
No. 6 Oil
No. 6 Oil

| | |
|---|---|
| TOTAL OBSERVED VOLUME (T.O.V.) BBLS. | 831.45 |
| LESS FREE WATER BBLS. | 0.00 |
| GROSS OBSERVED VOLUME (G.O.V.) BBLS. | 831.45 |
| LIQUID - (G.O.V.) BBLS. | 0.00 |
| NON-LIQUID - (G.O.V.) BBLS. | 831.45 |

| FWD/DRAFT | AFT/DRAFT | LIST |
|---|---|---|
| 4 - 00 | 5 - 00 | 0 |

BALLAST USED THIS VOYAGE — TANK#

GAUGE TAKEN AT DESIGNATED GAUGE POINTS — LOCATED AFT

SAMPLES TAKEN "YES"

BALLASTING TOOK PLACE AT:

| | VESSEL LINE INTEGRITY | TANK NUMBER |
|---|---|---|
| TOP LINES | STRIPPED YES | |
| BOTTOM LINE | STRIPPED YES | |
| HOSES/ARMS | DROPPED YES | |

| ADDITIONAL OIL FOUND | BALLAST TANKS | VOID SPACES | COFFERDAMS/ DUCT KEELS | OTHER |
|---|---|---|---|---|
| TOV | | | | |
| BBLS | | | | |
| SEA VALVE | PORT | STARBOARD | OVERBOARD | |
| SEAL NOS | | | | |

VESSEL REPRESENTATIVE — RANK — ITS CALEB BRETT

PORT REPRESENTATIVE — POSITION

ITS Intertek Testing Services
Caleb Brett

# VESSELS ULLAGE REPORT

| REPORT NUMBER: | PH/03-2708 |
|---|---|
| CLIENT REF: | |

AFTER LOAD

| SEA VALVE SEAL NUMBERS | PORT | STARBOARD | OVERBOARD |
|---|---|---|---|
| | | | |

| VESSEL | PORT | CUSTOMER PRODUCT DESCRIPTION | VOY NO. | DATE / TIME GAUGED |
|---|---|---|---|---|
| B-120 | AMERADA HESS, D.A. | No. 6 Oil | | 4/23/03 |

| TANK NO. | GAUGE | TRIM CORR GAUGE | T.O.V. BBLS | FREE WATER GAUGE | FREE WATER BBLS | G.O.V. BBLS | TEMP DEG F | API | V.C.F. 6B | G.S.V. BBLS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1P | 27 - 1 1/2 | | 2,438.06 | NIL | | 2,438.06 | 130.2 | 6.3 | 0.97440 | 2,375.65 |
| 1S | 25 - 11 1/4 | | 2,906.64 | NIL | | 2,906.64 | 130.3 | 6.3 | 0.97420 | 2,831.65 |
| 2P | 24 - 0 1/2 | | 4,439.20 | NIL | | 4,439.20 | 131.4 | 6.3 | 0.97390 | 4,323.34 |
| 2S | 23 - 11 1/4 | | 4,394.86 | NIL | | 4,394.86 | 131.5 | 6.3 | 0.97390 | 4,280.15 |
| 3P | 23 - 8 1/2 | | 5,302.57 | NIL | | 5,302.57 | 130.3 | 6.3 | 0.97420 | 5,165.76 |
| 3S | 23 - 10 1/2 | | 5,166.99 | NIL | | 5,166.99 | 130.2 | 6.3 | 0.97440 | 5,036.66 |
| 4P | 23 - 10 3/4 | | 4,369.98 | NIL | | 4,369.98 | 130.2 | 6.3 | 0.97440 | 4,258.11 |
| 4S | 23 - 11 1/4 | | 4,390.17 | NIL | | 4,390.17 | 130.3 | 6.3 | 0.97420 | 4,276.90 |
| 5P | 20 - 10 1/2 | | 5,279.87 | NIL | | 5,279.87 | 130.3 | 6.3 | 0.97420 | 5,143.65 |
| 5S | 22 - 3 1/4 | | 4,840.61 | NIL | | 4,840.61 | 130.5 | 6.3 | 0.97420 | 4,715.72 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | VOL AVE TEMP | 130.5 | | | |
| DRAFT FWD: | | 13 - 06 | DRAFT AFT: | | 16 - 00 | LIST DEG: | 0.00 | WATER FINDING METHOD USED | | |

| | | | | | |
|---|---|---|---|---|---|
| Total Observed Volume ( BBLS) | 43,530.95 | Table 11 WCF | 0.16035 | SIGNATURES | |
| Total Observed Volume (GALS) | 1,828,300 | GSV Long Tons | 6,800.057 | | |
| Free Water | 0.00 | GSV Metric Tons | 6,909.198 | VESSEL REPRESENTATIVE | |
| Gross Observed Volume (G.O.V.) | 43,530.95 | GSV Pounds | 15,232,128 | | |
| Gross Standard Volume (G.S.V.) | 42,407.59 | GSV Short Tons | 7,616.064 | ITS CALEB BRETT | |
| Total Calculated Volume (T.C.V.) | 42,407.59 | GSV Cubic Meters | 6,742.27 | | |

| | |
|---|---|
| TOTAL VESSEL O.B.Q. | 831.45 |
| TOTAL QUANITY LOADED (G.S.V.) | 41,576.14 |
| TOTAL QUANITY LOADED (T.C.V.) | 41,576.14 |

APPENDIX A

ITS Intertek Testing Services
Caleb Brett

# VESSELS ULLAGE REPORT

| REPORT NUMBER: | PH/03-2682 |
|---|---|
| CLIENT REF: | |

BEFORE LOAD

| SEA VALVE SEAL NUMBERS | PORT | STARBOARD | OVERBOARD |
|---|---|---|---|
| | | | |

| VESSEL | PORT | CUSTOMER PRODUCT DESCRIPTION | VOY NO. | DATE / TIME GAUGED |
|---|---|---|---|---|
| B 120 | COASTAL E.P. | # 6 FUEL OIL | | 4/23/02 |

| TANK NO. | GAUGE | TRIM CORR GAUGE | T.O.V. BBLS | FREE WATER GAUGE | FREE WATER BBLS | G.O.V. BBLS | TEMP DEG F | API | V.C.F. 6B | G.S.V. BBLS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1P | 27-1-3/4 | | 2,430.59 | | | 2,430.59 | 130.0 | 6.3 | 0.97440 | 2,368.37 |
| 1S | 25-11-1/4 | | 2,906.64 | | | 2,906.64 | 130.2 | 6.3 | 0.97440 | 2,832.23 |
| 2P | 24-0-1/2 | | 4,439.20 | | | 4,439.20 | 131.0 | 6.3 | 0.97410 | 4,324.22 |
| 2S | 23-11-0 | | 4,402.92 | | | 4,402.92 | 131.0 | 6.3 | 0.97410 | 4,288.88 |
| 3P | 23-3-1/4 | | 5,422.33 | | | 5,422.33 | 130.1 | 6.3 | 0.97440 | 5,283.52 |
| 3S | 23-4-3/4 | | 5,380.88 | | | 5,380.88 | 130.2 | 6.3 | 0.97440 | 5,243.13 |
| 4P | 23-10-3/4 | | 4,369.98 | | | 4,369.98 | 130.1 | 6.3 | 0.97440 | 4,258.11 |
| 4S | 23-11-1/4 | | 4,390.17 | | | 4,390.17 | 130.2 | 6.3 | 0.97440 | 4,277.78 |
| 5P | 21-8-3/4 | | 5,013.89 | | | 5,013.89 | 130.0 | 6.3 | 0.97440 | 4,885.53 |
| 5S | 22-1-1/4 | | 4,905.09 | | | 4,905.09 | 130.2 | 6.3 | 0.97440 | 4,779.52 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | VOL AVE TEMP | 130.3 | | | |

| DRAFT FWD: | 13-6 | DRAFT AFT: | 16-0 | LIST DEG: | 0.00 | WATER FINDING METHOD USED |
|---|---|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Total Observed Volume ( BBLS) | 43,661.69 | Table 11 WCF | 0.16035 | SIGNATURES |
| Total Observed Volume (GALS) | 1,833,791 | GSV Long Tons | 6,821.496 | |
| Free Water | 0.00 | GSV Metric Tons | 6,930.981 | VESSEL REPRESENTATIVE |
| Gross Observed Volume (G.O.V.) | 43,661.69 | GSV Pounds | 15,280,151 | |
| Gross Standard Volume (G.S.V.) | 42,541.29 | GSV Short Tons | 7,640.075 | ITS CALEB BRETT |
| Total Calculated Volume (T.C.V.) | 42,541.29 | GSV Cubic Meters | 6,763.53 | |

| | |
|---|---|
| TOTAL VESSEL O.B.Q. | |
| TOTAL QUANITY LOADED (G.S.V.) | |
| TOTAL QUANITY LOADED (T.C.V.) | |

APPENDIX E

ITS Intertek Testing Services
Caleb Brett

# VESSELS ULLAGE REPORT

| REPORT NUMBER: | PH/03-2682 |
|---|---|
| CLIENT REF: | |

AFTER LOAD

| SEA VALVE SEAL NUMBERS | PORT | STARBOARD | OVERBOARD |
|---|---|---|---|
| | | | |

| VESSEL | PORT | CUSTOMER PRODUCT DESCRIPTION | VOY NO. | DATE / TIME GAUGED |
|---|---|---|---|---|
| B 120 | COASTAL E.P. | # 6 FUEL OIL | | 4/24/03 |

| TANK NO. | GAUGE | TRIM CORR GAUGE | T.O.V. BBLS | FREE WATER GAUGE | FREE WATER BBLS | G.O.V. BBLS | TEMP DEG F | API | V.C.F. 6B | G.S.V. BBLS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1P | 11-7-1/4 | | 8,253.92 | | | 8,253.92 | 137.4 | 8.9 | 0.97100 | 8,014.56 |
| 1S | 10-6-3/4 | | 8,698.20 | | | 8,698.20 | 137.3 | 8.9 | 0.97100 | 8,445.95 |
| 2P | 8-5-1/2 | | 10,469.67 | | | 10,469.67 | 140.3 | 8.9 | 0.96990 | 10,154.53 |
| 2S | 8-6-1/4 | | 10,360.82 | | | 10,360.82 | 140.2 | 8.9 | 0.97010 | 10,051.03 |
| 3P | 12-9-3/4 | | 10,047.01 | | | 10,047.01 | 138.4 | 8.9 | 0.97140 | 9,759.67 |
| 3S | 12-6-1/4 | | 10,189.80 | | | 10,189.80 | 136.2 | 8.9 | 0.97160 | 9,900.41 |
| 4P | 8-6-1/2 | | 10,321.84 | | | 10,321.84 | 141.7 | 8.9 | 0.96950 | 10,007.02 |
| 4S | 8-6-1/4 | | 10,366.26 | | | 10,366.26 | 141.4 | 8.9 | 0.96950 | 10,050.09 |
| 5P | 8-6-3/4 | | 10,043.32 | | | 10,043.32 | 142.1 | 8.9 | 0.96930 | 9,734.99 |
| 5S | 8-6-1/2 | | 10,152.11 | | | 10,152.11 | 142.0 | 8.9 | 0.96930 | 9,840.44 |
| | | | LOADED QUANTITIES | 53,417.40 | | | | | | |
| | | | V.E.F. | 1.0047 | | | | | | |
| | | | ADJUSTED QUANTITIES | 53,167.51 | | | | | | |
| | | | | | | VOL AVE TEMP | 139.6 | | | |
| DRAFT FWD: | | 25-6 | DRAFT AFT: | 25-6 | LIST DEG: | 0.00 | WATER FINDING METHOD USED | | | |

| | | | | |
|---|---|---|---|---|
| Total Observed Volume ( BBLS) | 98,902.95 | Table 11 WCF | 0.15738 | SIGNATURES |
| Total Observed Volume (GALS) | 4,153,924 | GSV Long Tons | 15,101.979 | |
| Free Water | 0.00 | GSV Metric Tons | 15,344.365 | VESSEL REPRESENTATIVE |
| Gross Observed Volume (G.O.V.) | 98,902.95 | GSV Pounds | 33,828,432 | |
| Gross Standard Volume (G.S.V.) | 95,958.69 | GSV Short Tons | 16,914.216 | ITS CALEB BRETT |
| Total Calculated Volume (T.C.V.) | 95,958.69 | GSV Cubic Meters | 15,256.21 | |

| | |
|---|---|
| TOTAL VESSEL O.B.Q. | 42,541.29 |
| TOTAL QUANITY LOADED (G.S.V.) | 53,417.40 |
| TOTAL QUANITY LOADED (T.C.V.) | 53,417.40 |

APPENDIX F

# ITS Intertek Testing Services
## Caleb Brett

VESSEL ULLAGE REPORT
BEFORE LIGHTERING

Vessel(s) : B-120
Port/Terminal: BUZZARDS BAY
Prod/Cargo : OIL

Your Reference :
Our Reference : EOS/99-930266
NO. 6 FUEL OIL
Date : 04/28/2003

| Tank No. | Ullage | Trim-List Corrected Ullage | T.O.V. Barrels | Free Water Tmage | Free Water Volume Barrels | G.O.V. Barrels | Temp * Fahr | API @60°F | Vol Cor Factor Table 59 | G.S.V. Barrels @ 60°F |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8' 11-1/2" | | 9,286.57 | 0' 0" | 0.00 | 9,286.57 | 130.0 | 9.2 | 0.9738 | 9,043.26 |
| 2 | 8' 8" | | 10,389.04 | 0' 0" | 0.00 | 10,389.04 | 130.0 | 9.2 | 0.9738 | 10,116.85 |
| 3 | 9' 4-1/4" | | 11,576.28 | 0' 0" | 0.00 | 11,576.28 | 130.0 | 9.2 | 0.9738 | 11,272.98 |
| 4 | 15' 4-3/4" | | 7,664.90 | 0' 0" | 0.00 | 7,664.90 | 130.0 | 9.2 | 0.9738 | 7,464.08 |
| 5 | 8' 9-1/4" | | 9,962.71 | 0' 0" | 0.00 | 9,962.71 | 130.0 | 9.2 | 0.9738 | 9,701.69 |
| 5 | 7' 11" | | 9,714.83 | 29' 10" | 1,560.71 | 8,154.12 | 130.0 | 9.2 | 0.9738 | 7,941.01 |
| 5 | 6' 5-3/4" | | 11,150.99 | 26' 3-3/4" | 3,475.81 | 7,675.18 | 130.0 | 9.2 | 0.9738 | 7,474.09 |
| 6 | 13' 7-3/4" | | 11,013.95 | 0' 0" | 0.00 | 11,013.95 | 130.0 | 9.2 | 0.9738 | 10,730.23 |
| 6 | 8' 7-1/2" | | 10,325.88 | 0' 0" | 0.00 | 10,325.88 | 130.0 | 9.2 | 0.9738 | 10,055.34 |
| 6 | 8' 7-1/2" | | 10,119.87 | 0' 0" | 0.00 | 10,119.87 | 130.0 | 9.2 | 0.9738 | 9,854.73 |

Note: Draft Forward Port 24-6
Draft Forward Stbd 27-1

Note: Draft Aft Port 23-2
Draft Aft Stbd 25-5

Draft Forward: Draft Aft: List:

Water Finding Method (Paste) Used:

| | Barrels |
|---|---|
| Total Observd Vol | 101,210.30 |
| Less Free Water | 5,056.52 |
| Gross Observd Vol | 96,153.48 |
| Gross Std Vol | 93,634.26 |
| Total Calc Vol | 98,690.78 |

| | |
|---|---|
| W.C.F. Table 11 | 0.15704 |
| Long Tons | 14,704.32 |
| Metric Tons | 14,940.32 |
| Tot Calc Vol | 98,690.78 |
| Less ROB/CEQ | 0.00 |
| Quantity L/D | 98,690.78 |

SEA VALVE NUMBERS

| Port | Stbd | Overboard |
|---|---|---|

Voyage No Date/Time Gauged
15B 4/23/03 1200

For Intertek Testing Services

# Intertek Testing Services
## Caleb Brett

VESSEL ULLAGE REPORT
BEFORE DISCHARGE

Vessel(s) : B-120 Your Reference :
Port/Terminal: NIRANT CANAL LLC SANDWICH, MA. Our Reference : BOS/99-930351
Prod/Cargo : OIL NO. 6 FUEL OIL Date : 04/30/2000

| Tank No. | Ullage Trim-List Corrected Ullage | T.O.V Barrels | Free Water Inhage | Free Water Volume Barrels | G.O.V. Barrels | Temp ° Fahr | API @60°F | Vol Cor Factor Table 6B | G.S.V. Barrels @ 60°F |
|---|---|---|---|---|---|---|---|---|---|
| 2P | 8'-11 | 9,236.57 | 0' 0" | 0.00 | 9,236.57 | 98.6 | 9.2 | 0.9857 | 9,103.77 |
| 3P | 8' 9-3/4" | 10,332.60 | 0' 0" | 0.00 | 10,332.60 | 103.4 | 9.2 | 0.9815 | 10,141.45 |
| 4P | 9' 5" | 11,511.80 | 0' 0" | 0.00 | 11,511.80 | 111.6 | 9.2 | 0.9808 | 11,290.77 |
| 5P | 14' 6-1/4" | 8,304.09 | 0' 0" | 0.00 | 8,304.09 | 115.5 | 9.2 | 0.9769 | 7,835.20 |
| 6P | 8' 7-3/4" | 10,311.07 | 0' 0" | 0.00 | 10,311.07 | 121.2 | 9.2 | 0.9772 | 9,732.82 |
| 1S | 13' 10-3/4" | 7,417.40 | 0' 0" | 0.00 | 7,417.40 | 99.0 | 9.2 | 0.9855 | 7,339.85 |
| 1S | 16' 10" | 9,465.84 | 11' 6" | 9,207.83 | 258.01 | 50.0 | 9.2 | 1.0000 | 258.01 |
| 2S | 12' 3-1/2" | 10,364.84 | 0' 0" | 0.00 | 10,364.84 | 108.6 | 9.2 | 0.9819 | 10,177.24 |
| 3S | 8' 9-1/4" | 10,269.35 | 0' 0" | 0.00 | 10,269.35 | 116.8 | 9.2 | 0.9787 | 10,050.61 |
| 4S | 8' 9-1/2" | 10,055.38 | 0' 0" | 0.00 | 10,055.38 | 122.8 | 9.2 | 0.9765 | 9,815.08 |

Draft Forward: Port 25-10 Stbd 24-6
Draft Aft: Port 25-3 Stbd 24-9

Draft Forward: Draft Aft: List:
Water Finding Method (Paste) Used:

| | Barrels |
|---|---|
| Total Obsvd Vol | 96,718.94 |
| Less Free Water | 9,207.83 |
| Gross Obsvd Vol | 87,511.11 |
| Gross Std Vol | 85,818.89 |
| Total Calc Vol | 95,026.63 |

| | |
|---|---|
| B.C.F. Table 11 | 0.15704 |
| Long Tons | 13,476.98 |
| Metric Tons | 13,693.29 |
| Tot Calc Vol | 95,026.53 |
| Less ROB/OBQ | 3,514.52 |
| Quantity L/D | 91,512.01 |

SBA VALVE NUMBERS

| Port | Stbd | Overboard |
|---|---|---|
| | | |

Voyage No Date/Time Gauged
15-B 4/30/00 1100

For Intertek Testing Services

APPENDIX H

ITS Intertek Testing Services
Caleb Brett

# B . O . S . REPORT

Vessel : D 120
Port/Terminal : MIRANT CANAL LLC SANDWICH, MA.
Prod/Cargo : OIL NO. 6 FUEL OIL

Your Ref :
Our Ref : BOS/99-930351
Date : 05/02/2003

| Tank no. | Ullage | Type | T.O.V. Barrels | Free Water Ullage | Free Water Volume Barrels | G.O.V. Barrels | Temp ° Fahr |
|---|---|---|---|---|---|---|---|
| 1P | 34' 11-1/4" | Non-liquid | 120.11 | | 0.00 | 120.11 | 0.0 |
| 2P | 34' 1-1/2" | Non liquid | 545.46 | | 0.00 | 545.46 | 0.0 |
| 3P | 34' 10" | Non-liquid | 325.31 | | 0.00 | 325.31 | 0.0 |
| 4P | 34' 9-1/2" | Non-liquid | 162.55 | | 0.00 | 162.55 | 0.0 |
| 5P | 34' 1" | Non-liquid | 311.11 | | 0.00 | 311.11 | 0.0 |
| 1S | 34' 0-1/4" | Non-liquid | 206.22 | | 0.00 | 206.22 | 0.0 |
| 2S | 30' 1" | Non-liquid | 2,017.10 | 30' 9" | 1,759.65 | 257.45 | 0.0 |
| 3S | 33' 11-1/2" | Non-liquid | 717.89 | | 0.00 | 717.89 | 0.0 |
| 4S | 33' 11-1/2" | Non-liquid | 522.55 | | 0.00 | 522.55 | 0.0 |
| 5S | 34' 2 3/4" | Non-liquid | 345.97 | | 0.00 | 345.97 | 0.0 |

Fwd Draft: Port 4-0 Stbd 7 0
Aft Draft: Port 5-0 Stbd 7-0

| | Barrels |
|---|---|
| Total Observed Volume (T.O.V.) | 5,274.27 |
| Less Free Water | 1,759.65 |
| Gross Observed Volume (G.O.V.) | 3,514.62 |
| Total Liquid Barrels | 0.00 |
| Total Non-Liquid Barrels | 3,514.62 |

Forward Draft: Aft Draft:
List:
Ballast Tanks used:
Tank no.:
Ullages taken at designated Gauge Points
Located: CENTER Samples were not taken

Ballasting took place at: CENTER

| | Stripped | Dropped | Tank no. |
|---|---|---|---|
| Top Lines: | | | |
| Bottom Lines: | | | |
| Hoses/arm: | | | |

**Additional oil found: TOV Bbls**

| Ballast Tanks | Void Spaces | Coffer dams | Duct keels | Others |
|---|---|---|---|---|
| NA | NA | NA | NA | |

**Sea Valve Seal No's:**
PORT: STBD: OVERBD:

for Intertek Testing Services

APPENDIX I

APPENDIX 7

# Intertek Testing Services
## Caleb Brett

VESSEL GUAGE REPORT
BEFORE DISCHARGE

Your Reference :
Our Reference : BOS/59-93C391
Date : 05/21/2003

Vessel(s): B-10
Port/Terminal: MIRANT CANAL LLC SANDWICH, MA.
Grade/Cargo : OIL NO. 6 FUEL OIL

| Tank No. | Gauge | Trim+List Corrected Gauge | G.O.V. Barrels | Free Water Gauge | Free Water Volume Barrels | G.O.V. Barrels | Temp °F | API @60°F | Vol Cor Factor Table 5B | G.S.V. Barrels @ 60°F |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 0.00 |
| P | 20' 5-3/4" | | 0.00 | | 0.00 | | | | | 0.00 |
| P | 13' 8-1/2" | | 1,535.77 | 0' 0" | 0.00 | 1,535.77 | 99.1 | 9.2 | 0.9925 | 1,525.36 |
| P | 12' 3" | | 0.00 | | 0.00 | | | | | 0.00 |
| P | 13' 10-1/4" | | 1,945.42 | 0' 0" | 0.00 | 1,945.42 | 85.2 | 9.2 | 0.9907 | 1,927.33 |
| P | 20' 3" | | 0.00 | | 0.00 | | | | | 0.00 |
| S | 20' 5" | | 0.00 | | 0.00 | | | | | 0.00 |
| S | 15' 7" | | 1,523.99 | 0' 3" | 0.00 | 1,523.99 | 99.2 | 9.2 | 0.9929 | 1,513.17 |
| S | 20' 0-1/8" | | 0.01 | | 0.00 | | | | | 0.00 |
| S | 13' 5-1/2" | | 1,960.52 | 0' 0" | 0.00 | 1,960.52 | 95.1 | 9.1 | 0.9587 | 1,942.29 |
| S | 5' 4-3/4" | | 0.00 | | 0.00 | | | | | 0.00 |

Note: S Port and S Stbd bad slops oil and water mixture.
Reference only.

Draft Forward: Port 6-0 Stbd 5-5
Draft Aft: Port 7-0 Stbd 8-10

Draft Forward: Draft Aft: List
Water Finding Method (Paste) Used:

| | Barrels |
|---|---|
| Total Obsrd Vol | 6,955.70 |
| Less Free Water | 0.00 |
| Gross Obs'd Vol | 6,955.70 |
| Gross Std Vol | 6,938.85 |
| Total Calc Vol | 6,908.65 |

| | |
|---|---|
| W.C.F. Table 11 | 0.15136 |
| Long Tons | 1,044.93 |
| Metric Tons | 1,061.34 |
| Tot Calc Vol | 6,964.65 |
| Less BOB/OBQ | 265.31 |
| Quantity L/T | 1,646.34 |

SEA WATER SAMPLES

| Port | Stbd | Overboard |
|---|---|---|
| | | |

Voyage No: Date/Time Gauged
36 5/21/03

For Intertek Testing Services