Global Survey Solutions Ltd.

Your Reference :

Tengizchevroil

CONTENTS LISTING

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

We have pleasure in enclosing herewith, our report for the above referenced inspection.
The inspection was carried out according to the following reports:

Should you have any query, or require any additional information, please contact Mr John Smith at our London office (telephone number +44 207 123 45 67).

Global Survey Solutions Ltd.

SUMMARY OF QUANTITIES

Report No. TR-0006-01-2016
Date of report 07-Jan-16
Vessel Coral Palmata
Location Habas A.S. Terminal, Yarimca
Product LPG Mix

			Bill of Lading figures:		
BOL No.	Product name	BOL date	Metric Tons (vac)	Metric Tons (air)	GSV at 15°C, cu m
001	LPG Mix	07-Jan-16	2,025.071	2,000.710	3,667.942

Comparison of Ship's figures, Bill of Lading and Outturn quantity

Totals of the Bills Of Lading	LPG Mix			**Total**
Total Metric tons (vacuo)	2,025.071			2,025.071
Total Metric tons (air)	2,000.710			2,000.710
GSV at 15°C, cu m	3,667.942			3,667.942
METRIC TONS IN VACUO (GROSS WEIGHT)				**Total**
Vessel after loading	2,021.457			2,021.457
Vessel before discharge	2,020.987			2,020.987
Difference	-0.470			-0.470
% Difference	-0.023%			-0.023%
Bill of Lading	2,025.071			2,025.071
Outturn quantity	1,991.699			1,991.699
Difference	-33.372			-33.372
% Difference	-1.648%			-1.648%
METRIC TONS IN AIR (GROSS WEIGHT)				**Total**
Vessel after loading	2,017.314			2,017.314
Vessel before discharge	2,016.845			2,016.845
Difference	-0.469			-0.469
% Difference	-0.023%			-0.023%
Bill of Lading	2,000.710			2,000.710
Outturn quantity	1,987.616			1,987.616
Difference	-13.094			-13.094
% Difference	-0.654%			-0.654%
CUBIC METRES AT 15°C (GROSS STANDARD VOLUME)				**Total**
Vessel after loading	3,661.40			3,661.40
Vessel before discharge	3,660.55			3,660.55
Difference	-0.85			-0.85
% Difference	-0.023%			-0.023%
Bill of Lading	3,667.94			3,667.94
Outturn quantity	3,607.50			3,607.50
Difference	-60.45			-60.45
% Difference	-1.648%			-1.648%

For and on behalf of Global Survey Solutions Ltd.: A. Sezer

Global Survey Solutions Ltd.

CERTIFICATE OF QUANTITY DISCHARGED

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

Shore tank figures:

GRAND TOTALS:	**LPG Mix**	**Grand Totals**
Total Metric tons (vacuo) :	1,991.699	1,991.699
Total Metric tons (air) :	1,987.616	1,987.616
GSV at 15°C, cu m :	3,607.497	3,607.497
Average Density at 15°C, kg/l :	0.5521	

For and on behalf of Global Survey Solutions Ltd.: A. Sezer

Global Survey Solutions Ltd.

RECEIPT FOR DOCUMENTS

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

This is to confirm that I, undersigned Ship's Officer did receive from the undersigned Surveyor the following documents:

Document Title	Qty
Receipt For Documents	One
Time Log	One
Ullage Report before Discharge	One
Ullage Report after Discharge	One
Ullage Report (Loadport)	One
Vessel Experience Report	One
Tank Inspection Report	One
Total Pages:	7

Instructions regarding documents:	1 set for Vessel's own use

Should you have any query, or require any additional information, please contact Mr John Smith at our London office (telephone number +44 207 123 45 67).

Chief Officer of "Coral Palmata": V. Koshevoy

For and on behalf of Global Survey Solutions Ltd.: A.

Global Survey Solutions Ltd.

TIME LOG

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

Time	Date	Operations
11:55	06-Jan-16	Vessel arrived at roads (End of Sea Passage)
11:55	06-Jan-16	Notice of Readiness tendered
12:10	06-Jan-16	Vessel anchored - awaiting berthing instructions
13:20	06-Jan-16	Cleared by Customs / Free Pratique granted
16:10	06-Jan-16	Pilot on board
16:15	06-Jan-16	Anchor aweigh - proceeding to berth
17:00	06-Jan-16	Commenced mooring (first line ashore)
17:15	06-Jan-16	Inspector on board
17:45	06-Jan-16	Vessel all fast alongside berth no. 1
17:50	06-Jan-16	Vessel tanks measured
18:00	06-Jan-16	Hose connected
18:15	06-Jan-16	Notice of Readiness received/accepted
18:25	06-Jan-16	Cargo calculation completed
18:30	06-Jan-16	Commenced Discharging
04:00	07-Jan-16	Completed Discharging
04:30	07-Jan-16	ROB in Vessel's tanks measured
05:00	07-Jan-16	Hose disconnected
05:00	07-Jan-16	Discharged quantity calculation completed
05:10	07-Jan-16	Inspector's documents on board
05:30	07-Jan-16	Official cargo documents on board
05:35	07-Jan-16	Inspector left the vessel
05:50	07-Jan-16	Vessel sailed (ETS)

DELAYS				REASON
From		To		
11:55	06-Jan-16	16:10	06-Jan-16	Awaiting free jetty
04:05	07-Jan-16	04:30	07-Jan-16	Blowing lines

Remarks: (*) - As per information received from the Master of the vessel

Sea water temperature, °C
3.5

General weather condition
Calm

Product Name	Pumping time hours minutes	Outturn figure Mt air	Pumping rate Mt air / hour
LPG Mix	9 hours 30 minutes	1987.616	209.223

Chief Officer of "Coral Palmata": V. Koshevoy

For and on behalf of Global Survey Solutions Ltd.: A. Sezer

Global Survey Solutions Ltd.

VESSEL ULLAGE REPORT BEFORE DISCHARGE

VCF calculated by API Standard 2540, MPMS Ch 11.2 dated 2007

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

UNITS: Volume: **cu.m**. Linear: **m.** Temp: **°C** Pressure: **bar**

Tank No.	1P	1S	2P	2S	3P	3S		
Cargo	LPG Mix	LPG Mix	LPG Mix	LPG Mix	LPG Mix	LPG Mix		
100% capacity of tanks:	1,079.130	1,078.520	1,253.350	1,252.750	1,250.460	1,249.850		
Observed Liquid Innage, m	5.222	5.230	8.282	8.270				
Liquid Temperature, °C	-2.20	-2.00	-1.40	-1.10				
Vapour Temperature, °C	-1.10	-1.00	-0.80	-1.40	-2.90	-2.30		
Vapour Pressure, bar	1.58	1.58	1.60	1.60	0.02	0.02		
Inert gases, %								
Liquid Phase	Density @ 15oC (in vacuo) calculated from GC composition					Total:	2,008.026	MT (vacuo)
Correction for *Trim / List, m*	0.008	0.008	-0.002	-0.002				
Correction for *Float Buoy., m*	0.007	0.007	0.007	0.007				
Correction for *Tape, m*	0.001	0.001						
Corrected Liquid Innage, m	5.238	5.246	8.287	8.275				
Liquid Volume, m^3	608.708	609.450	1,148.076	1,146.120				
Shrinking Factor	0.999346	0.999350	0.999368	0.999379				
Volume corrected, m^3	608.310	609.054	1,147.350	1,145.408				
Density at 15°C	0.5521	0.5521	0.5521	0.5521				
VCF by Table 54E	1.0376	1.0371	1.0359	1.0352				
Liquid Volume at 15°C, m^3	631.158	631.668	1,188.494	1,185.749				
Liquid Metric tons (vac)	348.462	348.744	656.168	654.652				
Vapour Phase						Total:	12.961	MT (vacuo)
Mol.Mass	52.504	52.504	52.504	52.504	52.504	52.504		
Vapour Volume, m^3	470.422	469.070	105.274	106.630	1,250.460	1,249.850		
Corr.Vap.Vol. for *In.Gas.*	470.422	469.070	105.274	106.630	1,250.460	1,249.850		
Shrinking Factor	0.999377	0.999380	0.999386	0.999368	0.999323	0.999340		
Volume corrected, m^3	470.129	468.779	105.209	106.563	1,249.613	1,249.025		
Vapour Density, (kg/m^3)	6.0193	6.0171	6.0591	6.0725	2.4143	2.4090		
Vapour Metric tons (vac)	2.830	2.821	0.637	0.647	3.017	3.009		
Total Metric tons (vac)	351.292	351.565	656.805	655.299	3.017	3.009		
Correction Factor to air	0.99795	0.99795	0.99795	0.99795	0.99795	0.99795		
Total Metric tons (air)	350.572	350.844	655.459	653.956	3.011	3.003		
GSV at 15°C, cu m	636.283	636.778	1,189.649	1,186.921	5.465	5.450		
Before discharge:								
Total Metric tons (vac)	351.292	351.565	656.805	655.299	3.017	3.009		
Total Metric tons (air)	350.572	350.844	655.459	653.956	3.011	3.003		
GSV at 15°C, cu m	636.283	636.778	1,189.649	1,186.921	5.465	5.450		

Total quantity before discharge:	**LPG Mix**	**Total**
Metric Tons (vacuo)	2,020.987	2,020.987
Metric Tons (air)	2,016.845	2,016.845
Cubic Metres at 15°C	3,660.546	3,660.546

Sea Condition : Calm
Draft FWD : 6.80 m
AFT : 7.30 m
TRIM : 0.50 m
LIST : Nil

Remarks :
Density @ 15°C (in vacuo) calculated from GC composition
Vessel calculations based upon calibration tables

Chief Officer of "Coral Palmata": V. Koshevoy

For and on behalf of Global Survey Solutions Ltd.: A. Sezer

Global Survey Solutions Ltd.

VESSEL ULLAGE REPORT AFTER DISCHARGE

VCF calculated by API Standard 2540, MPMS Ch 11.2 dated 2007

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

UNITS: Volume: **cu.m**. Linear: **m.** Temp: **°C** Pressure: **bar**

Tank No.	1P	1S	2P	2S	3P	3S		
Cargo	LPG Mix	LPG Mix	LPG Mix	LPG Mix	LPG Mix	LPG Mix		
100% capacity of tanks:	1,079.130	1,078.520	1,253.350	1,252.750	1,250.460	1,249.850		
Observed Liquid Innage, m								
Liquid Temperature, °C								
Vapour Temperature, °C	-3.90	-3.90	-3.60	-4.40	-2.90	-2.30		
Vapour Pressure, bar	0.87	0.87	1.13	1.13	0.02	0.02		
Inert gases, %								

Liquid Phase Density @ 15oC (in vacuo) calculated from GC composition Total, Mt vac: MT (vacuo)

Correction for *Trim / List, m*								
Correction for *Float Buoy., m*								
Correction for *Tape, m*								
Corrected Liquid Innage, m								
Liquid Volume, m^3								
Shrinking Factor								
Volume corrected, m^3								
Density at 15°C								
VCF by Table 54E								
Liquid Volume at 15°C, m^3								
Liquid Metric tons (vac)								

Vapour Phase 28.142 MT (vacuo)

Mol.Mass	52.504	52.504	52.504	52.504	52.504	52.504		
Vapour Volume, m^3	1,079.130	1,078.520	1,253.350	1,252.750	1,250.460	1,249.850		
Corr.Vap.Vol. for *In.Gas.*	1,079.130	1,078.520	1,253.350	1,252.750	1,250.460	1,249.850		
Shrinking Factor	0.999294	0.999293	0.999303	0.999283	0.999323	0.999340		
Volume corrected, m^3	1,078.368	1,077.757	1,252.476	1,251.852	1,249.613	1,249.025		
Vapour Density, (kg/m^3)	4.4168	4.4168	5.0210	5.0359	2.4143	2.4090		
Vapour Metric tons (vac)	4.763	4.760	6.289	6.304	3.017	3.009		
After discharge:								
Total Metric tons (vac)	4.763	4.760	6.289	6.304	3.017	3.009		
Correction Factor to air	0.99795	0.99795	0.99795	0.99795	0.99795	0.99795		
Total Metric tons (air)	4.753	4.750	6.276	6.291	3.011	3.003		
GSV at 15°C, cu m	8.627	8.622	11.391	11.418	5.465	5.450		
Quantity Discharged:								
Total Metric tons (vac)	346.529	346.805	650.516	648.995				
Total Metric tons (air)	345.819	346.094	649.183	647.665				
GSV at 15°C, cu m	627.656	628.156	1,178.258	1,175.503				

Total Quantity Discharged:	**LPG Mix**	**Total**
Metric Tons (vacuo)	1,992.845	1,992.845
Metric Tons (air)	1,988.761	1,988.761
Cubic Metres at 15°C	3,609.573	3,609.573

Sea Condition : Calm
Draft FWD : 3.30 m
AFT : 5.60 m
TRIM : 2.30 m
LIST : Nil

Remarks :
Density @ 15°C (in vacuo) calculated from GC composition
Vessel calculations based upon calibration tables

Chief Officer of "Coral Palmata": V. Koshevoy

For and on behalf of Global Survey Solutions Ltd.: A. Sezer

Global Survey Solutions Ltd.

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Loadport	Odessa, Ukraine
Product	LPG Mix
Bill of Lading date	07-Jan-16

VESSEL ULLAGE REPORT (LOADPORT)

VCF calculated by API Standard 2540, MPMS Ch 11.2 dated 2007

UNITS: Volume: **cu.m**. Linear: **m.** Temp: **°C** Pressure: **bar**

Tank No.	1P	1S	2P	2S	3P	3S		
Cargo	LPG Mix	LPG Mix	LPG Mix	LPG Mix	LPG Mix	LPG Mix		
100% capacity of tanks:	1,079.130	1,078.520	1,253.350	1,252.750	1,250.460	1,249.850		
Observed Liquid Innage, m	5.220	5.230	8.281	8.272				
Liquid Temperature, °C	-2.10	-2.00	-1.40	-1.10				
Vapour Temperature, °C	-1.10	-1.00	-0.80	-1.40	-3.10	-2.70		
Vapour Pressure, bar	1.59	1.59	1.60	1.60	0.02	0.02		
Inert gases, %								
Liquid Phase	Density @ 15oC (in vacuo) calculated from GC composition					Total:	2,008.473	MT (vacuo)
Correction for *Trim / List, m*	0.008	0.008	-0.002	-0.002				
Correction for *Float Buoy., m*	0.007	0.007	0.007	0.007				
Correction for *Tape, m*	0.001	0.001						
Corrected Liquid Innage, m	5.236	5.246	8.286	8.277				
Liquid Volume, m^3	608.982	609.870	1,148.543	1,145.874				
Shrinking Factor	0.999335	0.999350	0.999368	0.999379				
Volume corrected, m^3	608.577	609.474	1,147.817	1,145.162				
Density at 15°C	0.5521	0.5521	0.5521	0.5521				
VCF by Table 54E	1.0373	1.0371	1.0359	1.0352				
Liquid Volume at 15°C, m^3	631.301	632.104	1,188.978	1,185.495				
Liquid Metric tons (vac)	348.541	348.985	656.435	654.512				
Vapour Phase						Total:	12.984	MT (vacuo)
Mol.Mass	52.504	52.504	52.504	52.504	52.504	52.504		
Vapour Volume, m^3	470.148	468.650	104.807	106.876	1,250.460	1,249.850		
Corr.Vap.Vol. for *In.Gas.*	470.148	468.650	104.807	106.876	1,250.460	1,249.850		
Shrinking Factor	0.999377	0.999380	0.999386	0.999368	0.999323	0.999340		
Volume corrected, m^3	469.855	468.359	104.743	106.808	1,249.613	1,249.025		
Vapour Density, (kg/m^3)	6.0426	6.0403	6.0591	6.0725	2.4161	2.4125		
Vapour Metric tons (vac)	2.839	2.829	0.635	0.649	3.019	3.013		
Total Metric tons (vac)	351.380	351.814	657.070	655.161	3.019	3.013		
Correction Factor to air	0.99795	0.99795	0.99795	0.99795	0.99795	0.99795		
Total Metric tons (air)	350.660	351.093	655.723	653.818	3.013	3.007		
GSV at 15°C, cu m	636.443	637.229	1,190.129	1,186.671	5.468	5.457		
Total Metric tons (vac)	351.380	351.814	657.070	655.161	3.019	3.013		
Total Metric tons (air)	350.660	351.093	655.723	653.818	3.013	3.007		
GSV at 15°C, cu m	636.443	637.229	1,190.129	1,186.671	5.468	5.457		

	LPG Mix	**Total**
Metric Tons (vacuo)	2,021.457	2,021.457
Metric Tons (air)	2,017.314	2,017.314
Cubic Metres at 15°C	3,661.397	3,661.397

Sea Condition : Calm
Draft FWD :
AFT :
TRIM :
LIST : Nil

Remarks :
Density @ 15°C (in vacuo) calculated from GC composition
Vessel calculations based upon calibrations tables

Chief Officer of "Coral Pal

For and on behalf of Global Survey Solutions Ltd.: A. Sezer

Global Survey Solutions Ltd.

VESSEL EXPERIENCE REPORT

Report No. TR-0006-01-2016
Date of report 07-Jan-16
Vessel Coral Palmata
Location Habas A.S. Terminal, Yarimca
Product LPG Mix
Outturn date 07-Jan-16

Voyage	Bill of Lading date	Cargo	Loadport	Vessel's figure Mt	Bill of Lading Mt	Vessel Load Ratio	Quali-fying
Last	01-Jan-16	LPG Mix	Midia	2,049.060	2,086.624	0.98179	Yes
2nd last	23-Nov-15	Propane	Constanta	2,429.700	2,472.350	0.98301	Yes
3rd last	12-Oct-15	Butane	Odessa	2,471.430	2,500.718	0.98800	No
4th last	26-Sep-15	LPG Mix	Odessa	2,560.350	2,600.794	0.98424	Yes
5th last	15-Aug-15	LPG Mix	Midia	2,618.850	2,664.228	0.98311	Yes
6th last	07-Aug-15	Propane	Constanta	2,616.120	2,661.076	0.98309	Yes
7th last	23-Jul-15	Butane	Botas	2,477.670	2,517.660	0.98411	Yes
8th last	12-Jul-15	Propane	Szczecin	2,308.020	2,345.088	0.98422	Yes
9th last	23-Jun-15	Propane	Amsterdam	2,549.820	2,591.338	0.98418	Yes
10th last	15-Jun-15	LPG Mix	Odessa	2,239.380	2,269.440	0.98678	Yes

Voyages excluded :

When Bill Of Lading is based on shipboard measurements.

Voyages prior to any structural cargo tank modifications.

Lighterings.

First voyage after dry dock.

Total	24,320.400	24,709.316
Total Qualifying	21,848.970	22,208.598
First average		0.98426
	+ 0.3 %	0.98721
	- 0.3 %	0.98131
Second Average		0.98381
	+ 0.3 %	0.98676
	- 0.3 %	0.98086

Ship's figures this voyage (Excluding ROB)	1,992.845
Bill of Lading this voyage	2,025.071
Vessel loaded ratio this voyage	0.98409

Vessel Experience Factor based on 2nd average

0.9838

The above mentioned quantities are for the last 0 voyages as obtained from ship's record and cannot be guaranteed as accurate by the surveyor. No liability can be assumed for errors resulting from improper information supplied by the vessel.

Remarks:

For receipt,
Chief Officer of "Coral Palmata": V. Koshevoy

For and on behalf of
Global Survey Solutions Ltd.
Surveyor's name: A. Sezer

Global Survey Solutions Ltd.

VESSEL TANK INSPECTION REPORT

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn quantity	07-Jan-16

	Time:	Date:
Tank inspection was carried out:	04:30	07-Jan-16

Inspection of "Coral Palmata" at on the January 7, 2016.

GENERAL INFORMATION

Name of Vessel:	Coral Palmata
Loading Place:	Habas A.S. Terminal, Yarimca
Installation:	LPG Terminal, berth No. 1
Date:	07-Jan-16
Cargoes to be loaded:	LPG Mix

INFORMATION OBTAINED ON BOARD

Previous cargoes: LPG mix in cargo tanks: 1, 2, 3 P/S

Quantity remaining on board:	28.084 Metric Tons (air)
Method of cleaning, if any:	none

TEST RESULTS ON VAPOURS AFTER PURGING WITH NITROGEN

Oxygen Content, % by volume: Less than 0.3

CONCLUSION

As the oxygen content was below the limit of 0.3% by volume and previous cargo being compatible with cargoes to be loaded, all ships cargo tanks were found to be in a satisfactory condition to receive designated cargoes.

For receipt,
Chief Officer of "Coral Palmata": V. Koshevoy

For and on behalf of
Global Survey Solutions Ltd.
Surveyor's name: A. Sezer

Global Survey Solutions Ltd.

SAMPLE RECEIPT

Report No. TR-0006-01-2016
Date of report 07-Jan-16
Vessel Coral Palmata
Location Habas A.S. Terminal, Yarimca
Product LPG Mix
Outturn date 07-Jan-16

Product	Sample source	Size	Sample description	Seal No.	Sample Distribution
LPG mix	In-line autosampler	1 Ltr.	Taken during discharge	12345	For Receiver
LPG mix	Single ship's tank composite	1 Ltr.	Multiple ship's tank composite	12346	For Receiver
LPG mix	In-line autosampler	1 Ltr.	Taken during loading at Odessa	12347	For testing

Date: 07-Jan-16 Receipt acknowledged

Chief Officer of "Coral Palmata": V. Koshevoy

Surveyor's name: A. Sezer

Global Survey Solutions Ltd.

SAMPLE REPORT

Report No. TR-0006-01-2016
Date of report 07-Jan-16
Vessel Coral Palmata
Location Habas A.S. Terminal, Yarimca
Product LPG Mix
Outturn date 07-Jan-16

Product	Sample source	Size	Sample description	Seal No.	Sample Distribution
LPG mix	In-line autosampler	1 Ltr.	Taken during loading at Odessa	12345	For Receiver
LPG mix	Single ship's tank composite	1 Ltr.	Multiple ship's tank composite	12346	For Receiver
LPG mix	In-line autosampler	1 Ltr.	Taken during loading at Odessa	12347	For testing
LPG mix	In-line autosampler	1 Ltr.	Taken during discharge	Open	For testing

Date: 07-Jan-16

Surveyor's name A. Sezer

Global Survey Solutions Ltd.

LETTER OF PROTEST ON APPARENT DISCREPANCY

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16

To: To Whom It May Concern

At the Port of:

Dear Sir,

On behalf of our principal(s), we hereby notify you that on the day of the following occurrence was noted:

APPARENT DISCREPANCY:

Grade 1	LPG Mix
Including OBQ/ROB	**Metric Tons in vacuo (Gross Weight)**
Vessel after loading	2,021.457
Vessel before discharge	2,020.987
Difference	-0.470
% Difference	-0.023%
Bill of Lading	2,025.071
Outturn quantity	1,991.699
Difference	-33.372
% Difference	-1.648%
Including OBQ/ROB	**Metric Tons in air (Gross Weight)**
Vessel after loading	2,017.314
Vessel before discharge	2,016.845
Difference	-0.469
% Difference	-0.023%
Bill of Lading	2,000.710
Outturn quantity	1,987.616
Difference	-13.094
% Difference	-0.654%

Accordingly, we are holding you responsible for the loss and damage thereby sustained, as well as any consequential arising therefrom.

Please direct any written correspondence on this matter to:

Mr. John Smith
Global Survey Solutions Ltd.

Tel: +44 207 123 45 67
Email: ops@surveycalc.com
Email: info@surveycalc.com

Very truly yours:

Date:
Signed by:
For: Surveyor

Receipt acknowledged:

Date:
Signed by:
For: Ship

Global Survey Solutions Ltd.

Report No. TR-0006-01-2016
Date of report 07-Jan-16
Vessel Coral Palmata
Location Habas A.S. Terminal, Yarimca
Outturn date 07-Jan-16

SHORE TANK REPORT

VCF calculated by API Standard 2540, MPMS Ch 11.2 dated 2007

		Tank No. **K5**		Tank No.		Tank No.	
LIQUID PHASE		Before	After	Before	After	Before	After
Product		LPG Mix	LPG Mix				
Date	dd-mm-yy	06-Jan-16	07-Jan-16				
Time	0000	18:30	04:00				
Total Tank Volume	cu m	4,998.449	4,998.449				
Shrinkage Factor for Total Volume		0.99933	0.99929				
Total Volume Corrected	cu m	4,995.100	4,994.900				
Liquid level corrected	m		13.430				
Liquid Volume	cu m		3,516.071				
Liquid Temperature	°C		-1.1				
Shrinkage Factor for Liquid Volume			0.99958				
Liquid Volume Corrected	cu m		3,514.594				
Density at 15°C	kg/l	0.5521	0.5521				
Volume Correction Factor	Table 54E		1.03522				
Liquid Volume at 15°C	cu m		3,638.378				
Liquid Mass	Mt		2,008.748				
VAPOUR PHASE							
Vapour Vol. Corrected	cu m	4,995.100	1,480.306				
Vapour Temperature	°C	0	-0.5				
Vapour Pressure	bar	2.1	4.5				
Molecular Mass	g/mole	52.504	52.504				
Vapour Density	kg/m^3	7.1972	12.769				
Vapour Mass	Mt	35.951	18.902				
Total Mass	Mt	35.951	2,027.650				
Difference, Mass	Mt	1,991.699					
Total Weight in Air	Mt	35.877	2,023.493				
Difference, Weight in Air	Mt	1,987.616					
GSV at 15°C	cu m	65.117	3,672.614				
Difference, GSV at 15°C	cu m	3,607.497					

		Tank No.		Tank No.		Tank No.	
LIQUID PHASE		Before	After	Before	After	Before	After
Product							
Date	dd-mm-yy						
Time	0000						
Total Tank Volume	cu m						
Shrinkage Factor for Total Volume							
Total Volume Corrected	cu m						
Liquid level corrected	m						
Liquid Volume	cu m						
Liquid Temperature	°C						
Shrinkage Factor for Liquid Volume							
Liquid Volume Corrected	cu m						
Density at 15°C	kg/l						
Volume Correction Factor	Table 54E						
Liquid Volume at 15°C	cu m						
Liquid Mass	Mt						
VAPOUR PHASE							
Vapour Vol. Corrected	cu m						
Vapour Temperature	°C						
Vapour Pressure	bar						
Molecular Mass	g/mole						
Vapour Density	kg/m^3						
Vapour Mass	Mt						
Total Mass	Mt						
Difference							
Total Weight in Air	Mt						
Difference, Weight in Air	Mt						
GSV at 15°C	cu m						
Difference, GSV at 15°C	cu m						

SUB TOTALS:	**Product :**	**LPG Mix**	**Sub Totals**
Total Metric tons (vacuo) :		1,991.699	1,991.699
Total Metric tons (air) :		1,987.616	1,987.616
GSV at 15°C, cu m :		3,607.497	3,607.497

Terminal Representative: M. Olmez

Surveyor's name: A. Sezer

ANALYSIS REPORT
(Grade 1: LPG Mix)
Before Discharge

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16
Sample submitted as:	LPG Mix
Sample drawn:	by In-line autosampler
Sample description:	In-line autosample taken during loading
Received on:	06-Jan-16
Testing performed by:	Third-party laboratory

On the: 07-Jan-16

Test	Units	Method	Specification	Result		
Composition liquid		ASTM D 2163 ASTM D 2421		Units mass %	Units volume %	Units molar %
Ethane				0.36%	0.56%	0.63%
Propane				32.67%	35.55%	38.90%
Propene (propylene)				0.09%	0.10%	0.11%
n-Butane				48.42%	45.75%	43.74%
Methyl propane (isobutane)				17.86%	17.51%	16.13%
1-Butene				0.02%	0.02%	0.02%
trans-2-Butene				0.04%	0.04%	0.04%
cis-2-Butene				0.14%	0.12%	0.13%
2-Methyl propene (isobutylene)				0.05%	0.05%	0.05%
n-Pentane				0.06%	0.05%	0.04%
2-Methyl butane (isopentane)				0.29%	0.26%	0.21%
Molecular Weight		Calculated			52.503	
Relative Density 60/60°F (in vacuo)		Calculated			0.5520	
Density @ 15ºC (in vacuo)	kg/l	Calculated			0.5521	
Copper strip corrosion		ASTM D 1838			No. 1A	
Hydrogen Sulphide	ppm	ASTM D 2420			Nil	
Sulphur content	ppm	ASTM D 3246			25.2	
Vapour pressure at 37.8 deg C	Mpa	ASTM D 1267			0.647	
Hydrogen Sulphide (H2S)	ppm	UOP 212			Nil	
Mercaptan Sulphur	ppm	UOP 212			6.74	
Free water content	ppm	ASTM D 1835			None	
Residue on evaporation	volume %	ASTM D 2158			< 0.05	
Methanol	ppm	ISO 8174			Nil	

Chemist: S. Aksu

Global Survey Solutions Ltd.

ANALYSIS REPORT
(Grade 1: LPG Mix)
After Discharge

Report No.	TR-0006-01-2016
Date of report	07-Jan-16
Vessel	Coral Palmata
Location	Habas A.S. Terminal, Yarimca
Product	LPG Mix
Outturn date	07-Jan-16
Sample submitted as:	LPG Mix
Sample drawn:	by In-line autosampler
Sample description:	In-line autosample taken during discharge
Received on:	06-Jan-16
Testing performed by:	Third-party laboratory

On the: 07-Jan-16

Test	Units	Method	Specification	Result		
Composition liquid		ASTM D 2163 ASTM D 2421		Units mass %	Units volume %	Units molar %
Ethane				0.36%	0.56%	0.63%
Propane				32.67%	35.55%	38.90%
Propene (propylene)				0.09%	0.10%	0.11%
n-Butane				48.42%	45.75%	43.74%
Methyl propane (isobutane)				17.86%	17.51%	16.13%
1-Butene				0.02%	0.02%	0.02%
trans-2-Butene				0.04%	0.04%	0.04%
cis-2-Butene				0.14%	0.12%	0.13%
2-Methyl propene (isobutylene)				0.05%	0.05%	0.05%
n-Pentane				0.06%	0.05%	0.04%
2-Methyl butane (isopentane)				0.29%	0.26%	0.21%
Molecular Weight		Calculated			52.503	
Relative Density 60/60°F (in vacuo)		Calculated			0.5520	
Density @ 15ºC (in vacuo)	kg/l	Calculated			0.5521	
Copper strip corrosion		ASTM D 1838			No. 1A	
Hydrogen Sulphide	ppm	ASTM D 2420			Nil	
Sulphur content	ppm	ASTM D 3246			25.2	
Vapour pressure at 37.8 deg C	Mpa	ASTM D 1267			0.647	
Hydrogen Sulphide (H2S)	ppm	UOP 212			Nil	
Mercaptan Sulphur	ppm	UOP 212			6.74	
Free water content	ppm	ASTM D 1835			None	
Residue on evaporation	volume %	ASTM D 2158			< 0.05	
Methanol	ppm	ISO 8174			Nil	

Chemist: S. Aksu